



MINIMALIST APPROACH IN CONTEMPORARY RESIDENTIAL ARCHITECTURE IN URBAN CONTEXT

A Dissertation Submitted to the
Department of Architecture of the
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Abstract

Architecture is considered as a profession and the people who practice it - architects- are also considered as professionals. A professional is defined as;

"When a professional person agrees to provide his professional services to a client, and no contract exists with terms to the contrary, the professional owes a duty to the client to exercise reasonable, skill and care in conformity with the normal standards of his profession"

(Janssens, D.E.L., Design Build Explained, 1991)

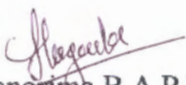
So it is responsible of Architects to provide client with the desired physical and psychological comfort. Therefore it is important to facilitate meaningful architecture to eliminate inappropriate ornamentation and disquietingly ornate architecture, which ignore the spaciousness and meaning.

Within above framework, this dissertation is an attempt to crystallize some thoughts About Minimalist Architecture, which can be seen as the pursuit of simplicity, as well as an ideal design approach which caters for essentialities out of different design approaches.

Gradually people have to satisfy on small plot size of land. Also stressful life style makes the living in tight urban context more complex. So emphasis will be paid to Minimalist approach in contemporary residential in urban context. As the house should be a place of tranquility by banishing disorder, ostentation and vanity to feel it as the master of habitable space.

DECLARATION


I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or report submitted to this university or to any other institution for a degree, diploma or other qualification.


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I hereby declare that the particulars given above are true and correct.


Archt. Arosh Gamage.
Individual Supervisor

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Introduction

The term Minimalism, appear as a new approach in various moods in time to time in different field such as Art, Music Dance, Architecture and etc. But for the Eastern, the basic concept of “Minimalism” isn’t a new way of thinking. As Lord Buddha has already explained the way to simply life, by taking away from the extremes of self – indulgence and opposing self – mortification. The influence of Buddhism has enhanced the thinking of “minimalist artist” to create spiritual design which awake people for “simplicity”.

“The minimum could be defined as the perfection that an artifact achieves when it is no longer possible to improve it by subtraction. This is the quality that an object has when every component, every detail, and every junction has been reduced or condensed to the essentials. It is the result of the omission of the inessentials.”

(Pawson, J., Minimum, 1992, p7)

It is important to concern that term “Minimum” is not only valid for artifact. As there are more to gain form it as a human being.

“Minimalism is more than a style. It is a philosophy that can be applied to almost anything in life. It is about space and light, function and refinement, clarity and precision. In a world of complexity it offers visual tranquility; it creates calm amidst the chaos of city living.”

(Ypma, H., London Minimum, 1996)

With the complexity of life style, minimalism has put positive impact on the field of architecture. Because of its characteristics of spatial quality; tranquility, simplicity, clarity and etc. have add new way to simple life style. The works of John Pawson, Tadao Ando etc. make clear, how “Minimal architecture meant for people”.

Minimal living has always offered a sense of liberation, a chance to be in touch with the essence of existence, rather than be distracted by its trivial. That is why not only Eastern but Western people also urge to “Minimal living”.

Minimalism can be seen as the reduction of architecture to its most basic concept of space and mass. Its central theme is not elimination of ornament but celebration of space and form. Therefore simplicity, clarity, tranquility, elementary geometry is some of the expedients the designer can use in creating artifacts or spaces that have the minimal quality. Therefore colour, texture, materials, light and shadow also play a major role to enhance the spatial quality of the minimalist space.

Importance of the study

Architecture is a dilemma in Sri Lanka as on many occasions it has not been successful in serving the qualitative needs required of it against the challenges of the modern era. When considering the present urban situation, expect for a few designs, most others do not cater to the deeper meaning in architecture.

As a result inappropriate ornamentation, disquietingly ornate architecture, can be seen everywhere that ignores the spaciousness, meaning and qualitative aspects of it. Minimalism as a design approach which facilitates meaningful architecture by providing calmness and simple wonderful spaces may be the best way to get rid of today's feverish and hectic environments. Further, it is appropriate, as it is a functional tool rather than a formal philosophy. This dissertation considers the importance of applying minimalism in the tight urban context. It is not an important task to create minimalism in the rural context, since it often contains large land plots, abundant lush greenery, views and scenery which contribute to the desired simple lifestyle people seek to achieve in the urban context. The challenge is to create calm contemplative, soothing and sensual residential in the hectic urban environments.

"A home is the common factor of being a retreat, a place of solitude"

(Powell, R., *The urban Asian House*, 1998)

Therefore the importance of this study is to encourage minimal architecture and investigate the appropriateness of this approach to residential in tight urban context.

Method of study

A case study approach has been adopted as the methodology of the study. In the first phase, a very brief description of the study, to convey the idea of minimalism shall be made.

The second chapter is a detailed study on contemporary minimal architecture with special consideration to characteristics, concepts and theories used to achieve spatial quality. Before starting on the topic of minimal architecture, some definitions regarding the topic will be discussed to clarify the frame-work of chapter two.

Finally selected case studies, to establish the theories and concepts of chapter two, will be described. Further these practical applications to justify the appropriateness of minimal architecture in the present urban context will be discussed.



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Scope and Limitations

Minimalism is a large subject area which can be applied to life, nature and all kinds of arts, architecture and beyond that. This dissertation pays particular attention to **minimal architecture**.

Further, it concentrates on **contemporary residential buildings in the urban context**. Since Spatial quality would be considered here. Also the dissertation focuses attention on, the use of colour, texture, light, materials and element details to enhance the spatial quality of the minimalist space.

Minimalism responds to environment, placement and relationship to site. It is an interesting characteristic which can be applied to large land plots with views and vistas in rural context. Since tight urban plots are discussed, the previously mentioned character (minimal way of synchronize the building in the context) will not be discussed, in detail

In the third chapter application of “Minimalist architecture” is discussed. Prior to local examples, few international examples are considered. Also international examples have been divided to titles as “Eastern” & “Western” approaches. Internationally there are more architects who practice with in “Minimalist concept”. When explaining application of Minimalist architecture, it is easy when the application can be defined clearly on characteristics of Minimalist architecture. So here architects, Tadao Ando, Shigeru Ban & John Pawson have been considered due to their way of practice in Minimalist architecture is specific, when concern with other architects. Also prior to each international example, each architect’s background is discussed to get understanding on the way each inspired to Minimalist architecture.



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1.1 Introduction

The impression of Minimalism is not new approach to east as it firstly appeared in the 'Buddhism' regarding human life. Though it is not labeled as 'Minimalism', but basics are in the Buddha's way of teaching. The primary guiding principle of Buddhist practice

is the Middle Way which was discovered by Gautama Buddha prior to his enlightenment. The *Middle Way* or *Middle Path* is often described as the practice of non-extremism; a path of moderation away from the extremes of self-indulgence and opposing self-mortification.



Fig: 1 Establishment of Buddhism in Sri Lanka

Source: www.lakehouse.lk/mihintalava/binlanka-02.htm

weight on leading a simple life style being sympathetic to all the beings. Buddhism even emphasizes how laypeople must lead their lives in day to day practice by providing guide lines in the form of five precepts – “Pancha Seela”. The five precepts are not given in the form of commands such as “thou shalt not ...”, but are training rules in order to live a better life in which one is happy, without worries, and can meditate well.



Fig: 2 Following Buddha's way for a better life.

Source: www.simple-wisdom.net/

At present, also western people urge to follow Buddha's way because of understanding uncertainty of human life. People go here and there in the need of finding charm environment to minimize their stressful life style. But some have already understood “Simply –life style is best solution for all complexity. Simplicity is not a burden to live with. But it really needs a certain amount of commitment to lead a simple life; that is not some thing readily achievable. A commitment to live with the

essentials or a commitment not to adhere on to not essentials.

However, since human being, by nature, cannot be freed from all the desires the degree of simplicity may vary with every individual's perception of what Minimalism is.

1.2 Minimalism in other disciplines

"Minimalism as a concept was first used in the world of art to characterize the work of Donald Judd, Sol Le Witt and several others. Soon afterwards, this creative approach began to take hold in architecture, and the works of many contemporary architects are rooted in Minimalism to a greater or lesser degree."

(Franco. B., Minimalist Architecture, 2002)

Post – Painterly Abstraction brought the reductive process possibilities of pure painting to a logical end. Therefore, artists in the 1960's and 1970's who were exploring reductive notions had to find a new way to communicate their ideas. Abandoning the painted canvas, these artists explored the reductive tradition with highly experimental three dimensional work. This new brand of art was eventually labeled "Minimal Art". Like many other styles, a diverse group of artists were at one point or another during their careers classified as minimalists. These artists included Robert Morris, Daniel Buren, Dan Flavin, Tony Smith, Sol Lewitt, Ellsworth Kelly, Donald Judd, Dorothea Rockburn, Fred Sandback, Carl Andre, Richard Serra, and Eva Hesse.

The name Minimal was applied to this style because the art seemed to have a minimal amount of art content. It certainly did not refer to the real world as Pop Art did, it seemed to lack any of the emotional or expressive content characteristic of the Abstract Expressionism and it usually was so simple that it seemed to lack any

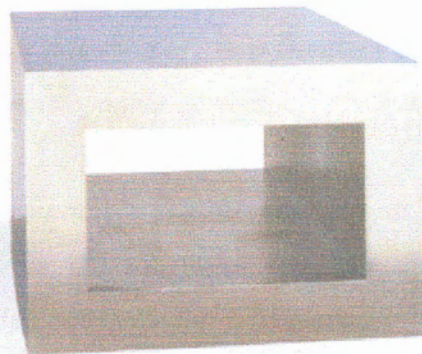


Fig: 3 Untitled -1968 by Donald Judd
Source: <http://arted.osu.edu/160/>

internal, compositional relationships. The minimal artists were more interested in pure shape, color, and texture of the object and how it related to the viewer in space.

The work was often placed on the floor, abandoning the sculpture stand, to occupy the visitor's space to ensure that their attention was captured. The Minimalists created work which made the viewer participate and contemplate what its meaning or purpose was. They were interested in how a space could be transformed or altered by their art. The artists were often absent from the art making process itself, carrying the reductive tradition further.

The physical piece was sometimes made by following a set of instructions or diagrams with precision in factories. The Minimalists were interested in continuity and order. They were interested in what comes next and what the final piece was as a whole. Their work did not refer to anything because that would designate it as inferior to what it represented. This belief is the basis of why their work was often titled as "Untitled". The meaning of the art could no longer be found within the art, but outside it in its surrounding environment. This cerebral approach to art often implied that the idea was more important than the object, a line of thinking that eventually led to Conceptual Art.

1.2.1 Minimalism in Art

"Minimal Art is a genuinely American phenomenon inseparably linked to the flourishing New York art world of the mid – 1960s. The sixties was a decade of 'new frontiers', the continual breaking down of barriers and apparently unstoppable economic, social and cultural growth.

If one examines the source from the sixties it is remarkable that the protagonists of Minimal Art explicitly disassociated themselves from the European tradition. For example, in 1964 Judd stated polemically: "I'm totally uninterested in European art and I think it's over with. ""

(Ursprung P., Sachs, A., & Ruby, A., Minimal Architecture, 2003, p6)

1.2.1.1 MINIMAL ARTISTS' APPROACHES IN ART (1960S)

Tony Smith worked for Frank Lloyd Wright in 1938 and 1939. He then spent his life as an architect with his own practice in New York City as well as a teacher of architecture and design at several universities and colleges.

Dissatisfied with the impermanence that his building designs had, he began to develop his long held interest of sculpture. In 1960, while he taught full time, Tony toyed with the construction of sculpture from cardboard and wood. Industrial Welding Company in Newark, New Jersey produced his first sculpture called, "The Black Box". This idea is what has earned Tony Smith the title Father of Minimal Art. What he was doing was taking the art process completely out of the hands of the artist. He depended on the manufacturer to follow a specific set of rules that he carefully designed. The instructions are the piece of art.



Fig: 4 Tony Smith's sculpture – Gracehopper
Source: <http://arted.osu.edu/160/unim11ts>.

He would also place the sculpture close to the ground, absent of a base or plinth that made his art a "presences" rather than a sculpture. Tony liked to display his work in his backyard gallery rather than inside indoor galleries and museums.

"Since Tony Smith had already been named the "Father of Minimal Art", Donald Judd (Don Judd) must take the title as the "Son of Minimal Art", Born in 1928."

(L.C., "Donald Judd", <http://arted.osu.edu/160/>)

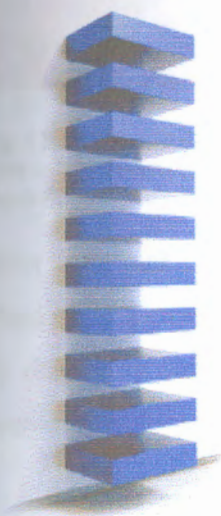


Fig: 5 Donald Judd's work –
untitled, 1969/1982

Source:
[http://arted.osu.edu/160/
11_Judd.php](http://arted.osu.edu/160/11_Judd.php)

Donald Judd spent most of his time painting dark abstractions. In the early 1960s Donald Judd abandoned painting, having recognized that "actual space is intrinsically more powerful and specific than paint on a flat surface." His move into three dimensions was coincident with a growing acknowledgment among other artists of his generation of the physical environment as an integral aspect of an artwork.

His first piece was exhibited at the Green Gallery in New York City in 1963. The sculpture was flat and blank compared to the works of the Abstract Expressionist artists who preceded him. Minimalist sculpture broke with illusionistic conventions by translating compositional concerns into three dimensions, rendering the work a product of the exchange between the object, the viewer, and the environment.

"Judd became known as one of the key exponents of 'Minimalism', but it was a label that he strongly rejected. Although he shared many of the principles identified with Minimalist art — the use of industrial materials to create abstract works that emphasise the purity of colour, form, space and materials — he preferred to describe his own work as 'the simple expression of complex thought'...."

(Tate, "Donald Judd," <http://www.tate.org.uk/modern/exhibitions/judd/default.htm>)



Fig: 6 Judd's 15 untitled works in concrete

Source: <http://www.depts.ttu.edu/communications/news/Stories/images/marfa/outside-art2.jpg>

The minimalists were strong proponents of creating work that stood for what it was rather than making it look like something else. The Minimalists, including Donald Judd, felt that if something was made to look like something else, the art was inferior to the object that it is trying to mimic.

Therefore, most of the pieces are left untitled which prevents the

viewer from making any analogies to objects they are familiar with. The whole idea behind the work was to let the viewer make all the connections for themselves without any clues from the artist. This ensured that the viewer was a full participant in the observation and understanding of the piece.



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Judd broke new ground in his exploration of volume, interval, space and colour. He rejected the tradition of artistic expression and craftsmanship by using industrial materials such as Plexiglas, sheet metal and plywood. By encouraging concentration on the volume and presence of the structure and the space around it, Judd's work draws particular attention to the relationship between the object, the viewer, and its environment.

"Urs Peter Flueckiger (an associate professor in Texas Tech's college of architecture) contends that even though Judd was never a registered architect, the concepts of architecture weighed heavily in to his designs."

(Chandler, C., "The weight of sunlight," <http://www.ttu.edu>)

Another Minimalist artist in 1960s is **Sol Lewitt** who worked with simple geometric structures, thinking that art needed a more scientific and rational approach. In one such structure, titled "Serial Project I (ABCD), 1968", his forms were open and closed modular units arranged on a four-part grid in every possible variation. These right-angled sculptures connected him with the style called minimalism, but he always refused to be identified as such. His minimalist structures focus on the system behind the creation, the assemblage of repeated forms to create a whole.

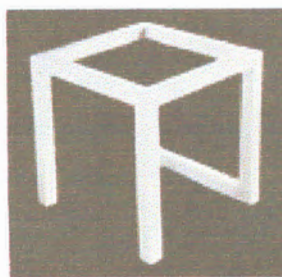


Fig: 7 Sol Lewitt's simple geometric structures.

Source: http://arted.osu.edu/160/12_LeWitt.php

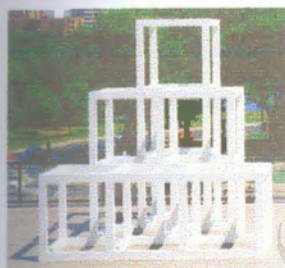


Fig: 8 Sol Lewitt - Repeated simple geometric forms

Source: http://arted.osu.edu/160/12_LeWitt.php

Lewitt repeated these simple geometric forms, creating new, sometimes unexpected arrangements. His minimalist approaches to artmaking, and the systems of construction, are related to his interest in mathematics and linguistics.

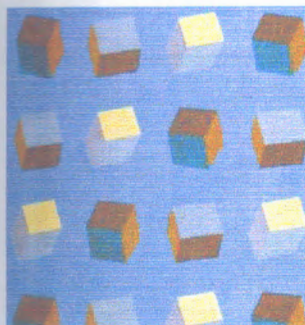


Fig: 9 Sol Lewitt - Cubes on Blue Ground, 1988, carpet

Source: <http://www.gramonline.org/Exhibitions/permanent/index.html>

Lewitt was the first artist to use the term, "conceptual art", which refers to the concept or idea of art being the most important aspect of the work. Because of his early use of the term and the nature of his work in the late 1960's, LeWitt is often called the "father of conceptual art."

In an earlier exhibit, LeWitt was honored in 1978, by becoming the first Minimalist and Conceptualist artist to have a retrospective at the Museum of Modern Art.

Among Minimalist artists in 1960s, **Dan Flavin** used different medium for art. About in 1963, he began to use fluorescent light as his medium for art. He was particularly interested in how the fluorescent light could alter the physical dimensions of a room and tricked the viewer's eyes.



Fig: 10 Dan Flavin – Monument for V. Tatlin
Source: http://arted.osu.edu/160/11_Flavin.php

The first of these fluorescent works, "The Diagonal of May 25", from 1963, was a standard, eight foot, long, white fluorescent tube attached diagonally to a wall that cast light and shadow around its space. His use of conventional light fixtures, which were all ready made objects, allowed Flavin to step away from the actual art building process itself and to focus on the conceptual final form. This idea was common among the Minimal artists. He placed color light in strategically planned spaces to create his illusions.

The interplay of the colors and their varying intensities produced an effect across the confines of the gallery space, which in effect created a painting of color. His piece "Untitled (to the Innovator Wheeling Beachblow)", made in 1968, serves as an example of this concept. This piece consists of a framework of fluorescent tubes; pink, gold, and daylight set in a corner of a gallery space. The reflections created an illusion of color that played with the viewer's eyes of the actual dimensions of the space.

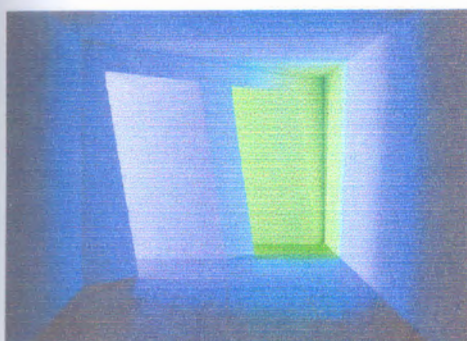


Fig: 11 Dan Flavin - untitled work of light
Source: http://www.depts.ttu.edu/communications/news/stories/gallery_photo/06-marfa.php

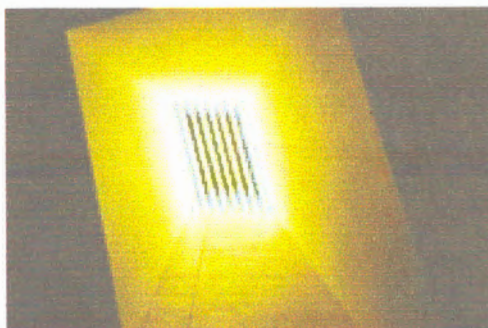


Fig: 12 Dan Flavin's sculptures using Florescent light
Source: http://www.depts.ttu.edu/communications/news/stories/gallery_photo/06-marfa.php

"Minimalism is a form of art in which objects are stripped down to their elemental, geometric form, and presented in an impersonal manner. It is an Abstract style of art which came about as a reaction against the subjective elements of Abstract Expressionism. Minimalist art frequently takes the form of installation or sculpture, for example with Donald Judd, Carl Andre, Dan Flavin and Sol LeWitt. However, there are also a number of minimalist painters, such as Ellsworth Kelly, and Frank Stella."

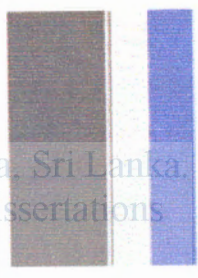
Artcyclopedia, <http://www.artcyclopedia.com/history/abstract-expressionism.html>

Chronological Listing of Minimalists

Barnett Newman 1905-1970 American Painter

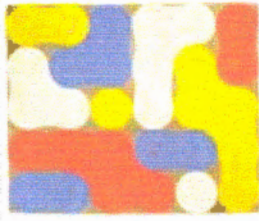


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Art Prints

Tony Smith 1912-1980 American Sculptor



Tony Smith

Art Prints

Ellsworth Kelly Born 1923 American Painter/Sculptor



Art Prints

Donald Judd

1928-1994 American Sculptor

Donald Judd March 22-April 11, 1928-1994

Art Prints

LINCOLN CENTER'S MASTER MOZART FESTIVAL



Art Prints

Sol LeWitt

Born 1928 American Conceptual Artist



Art Prints

Dan Flavin

1933-1996 American Installation Artist



Art Prints

Frank Stella

Born 1936 American Painter/Sculptor

Fig: 13 Listing of minimalist artists

Source:

<http://www.artcyclopedia.com/>

1.2.1 Minimalism in Music

Back to the 19th century, Robert Schumann (1810 – 1856) was one of the first composers to embrace the idea of an extremely simple musical composition. A piece that displays this element of minimal music by Schumann, with the subtitle of “scenes mignonnes sur quatre notes” (translated as little scenes over four notes). The minimal nature of this piece is well laid out in the subtitle as the work contained only the arrangements of four notes. Johannes Brahms (1833 – 1897), who was greatly influenced by Schumann, also found himself engrossed in the practice of reducing the complexities of music. As a result, he created compositions utilizing a mere two – note pattern.

However, it was Arnold Schoenberg's idea that musical compositions should be formed around a basic shape that laid the groundwork for what would become modern minimalist music. Schoenberg's theory allowed a musical piece to be coherent as it became highly developed without ever departing from the basic. With this idea in mind, Schoenberg developed his twelve-tone scheme for creating compositions.

Leaping ahead to the evolution of modern minimalist music, beginning in the 1960's, it can be seen that the tendency towards serial music and minimal structures in the work of Robert Ashley, Laurie Anderson, Steve Reich, Phillip Glass, John Adams and Terry Riley. These composers have produced a collective body of work that relies heavily on simplified harmonic progression and melodic line. Filled with rampant repetitiveness in rhythms, these musicians worked to reduce the excesses of expression and historical reference they found to be overly abundant in much contemporary classical music.

A key element of the minimalist music being showcased in this unit is the development of hypnotic rhythms. While this also occurred in the music of the 19th century composers, Laurie Anderson, Steve Reich and Phillip Glass have had the opportunity to employ modern technology in their efforts to conjure up mesmerizing rhythms.

1.2.1.1 MINIMAL ARTISTS' APPROACHE IN MUSIC (1960S)

Steve Reich, along with Terry Riley, LaMonte Young and Philip Glass, is considered to be one of the pioneers of minimalist music.

Reich's first recognition as a composer, although admittedly to a very small avant-garde audience, came as early as the mid-1960's with "It's Gonna Rain" (1965), and "Come Out" (1966). These ground breaking minimal compositions employing manipulated audio tapes and voice not only shocked the world of contemporary classical music but set the stage for the further development of the minimal aesthetic in both music and art.



Fig: 14 Steve Reich, one of the pioneers of minimalist music

Source:

<http://arted.osu.edu/160/unim11sr>.



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During his study at Mills College, Reich established a strong interest in the cultural music of Asia and Africa. Reich's work developed out of an extremely minimalist approach, such as 1972's "Clapping Music", which is exactly what one might think it was.

1976 saw Reich begin to branch into more orchestra-related work with compositions like "Music for Eighteen Musicians". This composition, recorded in 1978 for pianos, clarinets, voices, violin, cello, marimbas, maracas, and xylophones, has received a great deal of critical attention and is considered by some to be Reich's masterpiece. It involves a systemic and building use of improvisation with an emphasis on an almost hypnotic repetition, with chords seemingly changing one note at a time.



Fig: 15 Minimalist approaches - "Clapping Music"

Source:

<http://arted.osu.edu/160/unim11sr>.

1.2.3 Minimalism in Architecture

For almost forty years artists, architects, critics and art historians have been racking their brains for a definition of minimalism.

"Minimalism is more than a style. It is a philosophy that can be applied to almost anything in life. It is about space and light, function and refinement, clarity and precision. In a world of complexity it offers visual tranquility; it creates calm amidst the chaos of city living."

(Ypma, H., London Minimum, 1996)

"The minimum could be defined as the perfection that an artifact achieves when it is no longer possible to improve it by subtraction. This is the quality that an object has when every component, every detail, and every junction has been reduced or condensed to the essentials. It is the result of the omission of the inessentials."

(Pawson, J., Minimum, 1992, p7)



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"Under the term minimal architecture Peter Murray understands the "reduction of architecture to its most basic concepts of space, light and mass", indeed he introduces the discussion with Mies' dictum "Less is more". In book Minimalisms(2000) or Franco Bertoni's book Architettura Minimalista(2002) photos of buildings by Walter Gropius or Mies Van der Rohe are placed beside illustrations of sculptures by Donald Judd, suggesting that minimal Art functions as a kind of link between contemporary architecture and European high modernism as represented by Cubism, de stijl or the Bauhaus movement."

(Ursprung, P., Sachs, A., & Ruby, A., Minimal architecture, 2003, p7)



Meanwhile the author of Minimalism and Minimal architecture, Philip Ursprung has different view on the subject of “minimal art”. He presents it in this way.

“According to my way of thinking, to link the logic of Minimal Art to the theme of reduction is missing the point. It is for more closely related to spatial expansion as well as to the making of new territories. It articulates a transition from the dominance of two – dimensionality to that space, from painting to sculpture and from the object to the environment which characterized the artistic logic of the 1960s.”

(Ursprung, P., Sachs, A., & Ruby, A., Minimal architecture, 2003, p7)

The idea of reduction was suspect to minimal artists largely because it lies at the center of the modernist set of values. Another term for it is “essentialism”, i. e the idea that there exists such a thing as an essence or an inner being and that revealing or reaching this essence is the purpose of art and architecture instead of “essence” minimal artists prefer to talk of “presence”.

“Donald Judd emphasised, “I object to the whole reduction idea, because it's only reduction of those things someone does n't want. If my work is reductionist it's because it does n't have the elements that people thought should be there. But it has other elements that I like.”.....”

(Battcock, G., Minimal Art, A critical Anthology, 1968)

To 'build simply', one might suppose, is the easiest thing in the world. But the history of architecture and design tells us a different story. The simple artefact can be anything from lofty to trivial, moralistic to destructive, rigorous and reduced to formless. Conversely however, the complex artefact may be either attention-grabbing or lofty, informative or moralistic, meaning-laden or reduced and rigorous. The dilemma is evident. To build simply, to design simply is, both in theory and practice, an extremely complex undertaking.

"The rules according to which Sol Lewitt's grids are composed may well be simple but the form that results produce an endless number of views through and overlays. And although the grey – painted wooden structures that Robert Morris produced in the mid – 1960s are apparently simple forms, for the viewer they produce confusing passageways, frames and flatforms."Simplicity of shape does not necessarily equate with simplicity of experience", as he said. "

(Ursprung, P., Sachs, A., & Ruby, A., Minimal architecture, 2003, p8)

In the field of architecture, the term Minimalism was used, at times with caution and at others with determination, to connote the works of architects from profoundly different origins and cultural backgrounds, who had based their own work on a reduction in expressive media, a rediscovery of the value of empty space and a radical elimination of everything that does not coincide with a programme, also with minimalistic design overtones, of extreme simplicity and formal cleanliness.

In the 1980s and 1990s Donald Judd wrote repeatedly about architecture. He converted existing buildings. He made sketches for projects, some of which were realized by architects. He designed furniture that was manufactured in series.

Judd's position in the 1980s must have greatly suited many architects, above all the Europe, who wanted to liberate themselves from the stylistic confines of post modernist architecture. Every indication of a supposed relationship between Minimal Art and architecture was therefore extremely welcome. For example the frequently quoted statement by Tony Smith, who an account of his career as an architect is often seen as a generator of Minimal Art's closeness to architecture, sound almost like a founding myth.



Fig: 16 Tony Smith – sculpture placed close to ground.
Source: <http://arted.osu.edu/160/unim11ts>.

The historical pre – existence of Minimal Art allowed minimalist architecture to fabricate an identity of its own by using a technique of implicit reference without ever positioning or exposing itself in the course of doing so.

"In a certain sense minimalist architecture used Minimal Art as a nominal reference space by means of which every kind of architecture that, in some way or order, recalled the look of Minimal art was automatically declared minimalist architecture."(p16)

(Ursprung, P., Sachs, A., & Ruby, A., Minimal architecture, 2003, p8)

As a consequence, over the past years, a group of architects has grown up whose work, that represents the core of what today is generally associated with the term minimalist architecture. Tadao Ando, John Pawson, Tony Fretton, David Chipperfield, Claudio Silvestrin, Alberto Campo is some of architects who designed buildings with the term of minimalist architecture.



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"In music, in art, in almost every human creative endeavour, there are always people who stand out, people whose achievements warrant focus and attention. They often establish new directions and creative pioneering approaches; they are leaders – they are the virtuosi in their chosen field of expertise."

(Ypma, H., London Minimum, 1996, p129)

It is vast area when concern about applications of "Minimalism" in Architecture. But in this study it is mainly focused on residential buildings where "Minimalism" is applied.

1.3 INSPIRATIONS TO MINIMALIST ARCHITECTURE

Minimalism is not about there being nothing there; on the contrary, it is a concentrated and rigorous attempt to return to the essence of things, to intensify, through subtraction, our appreciation of space, light, and the defining qualities of a few carefully chosen materials.

"Minimalism is not about living in an empty house. It is about applying standards as a way of fighting against a consumer society that continually shrieks at us to 'buy! Buy!' Inevitably people end up with a lot of junk that they neither use nor admire. The main challenge of minimalism is 'Why put up with it? Think and decide what is useful, important and beautiful and get rid of the rest.'"

(Ypma, H., *London Minimum*, 1996, p102)

When concerned on what kind of factors help architects to practice on minimalism architecture, there can be several issues. One of them is the inspiration of Buddhism or other religion and the nature. Also some time religion has helped them to enhance the quality of their minimalism architectural outputs. It will be cleared when considered about Architect John Pawson projects and his experiences on them.

John Pawson was drawn in the most unlikely way to a project of designing a monastery for an ancient order of monks. Requiring a new dwelling for some of their Czech brothers, the Cistercians of Sept-Fons - who are based in central France - had seen in a book an image of Calvin Klein's flagship store in Manhattan, which had been designed by Pawson. Admiring this, and reading the architect's acclaimed 1996 book *Minimum*, they recognized in him a kindred spirit, and so requested that he convert the site they had earmarked - a sloping patch of land west of Prague that



Fig: 18 Calvin Klein flagship store, Madison Avenue, New York, 1995

Source:

<http://www.eyestorm.com/>

incorporated a crumbling 18th Century manor house - into a new, 70,000-foot complex for the monks. Pawson, who for the last decade had made annual trips for inspiration to the Cistercian abbey of Le Thoronet in Provence, France, immediately warmed to the idea, describing it as 'the job of a lifetime'. The design emphasizes simplicity and serenity, and aims to reflect the 'incredible energy' that Pawson recognizes is harnessed by the monks.

Pawson has worked in a very different context, but lives up to those ambitions. Like the Cistercians, he rejects ornamentation. He looks for spiritual qualities in light and space. The Cistercians have always treated architecture as a reflection of their principles of simplicity and self denial. In the early days they produced buildings of sublime beauty, such as Romanesque abbey of Le Thoronet in Provence which has always been one of Pawson's own inspirations. He has tried to bring a sense of that quality to Novy Dvur - 'something that is new, but true to the Cistercian essence', as he puts it.

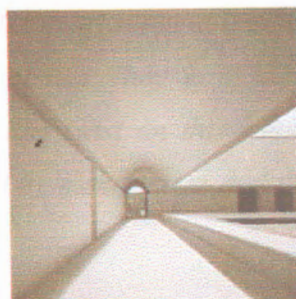


Fig: 19 Novy Dvur monastery model, cloister facing east
Source:

<http://www.eyestorm.com/>

"Last month I was in Novy Dvur to see the results of Pawson's research and to attend the consecration. It is perhaps the most unlikely place in the world to find the man who designed the store on Madison Avenue. But given that Pawson became famous for designing houses for the rich that look as austere as monasteries, there is a certain logic to the situation. Pawson, who has always wanted to live in the simplicity of a monk's cell, has finally had the chance to design a real one for himself."

(Sudjic, D., "The observer", <http://www.observer.guardian.co.uk>)

"Minimum" is a visual essay by renowned architect John Pawson, whose purpose in writing the book is to assert the idea of the 'minimum' as a way of thinking, working and living. It reveals an extraordinary range of stark, beautiful images including those of architecture, engineering, ceramics, furniture, photography and art from many periods

and cultures, all of which combine to express the idea of simplicity. As Pawson explains in his introduction these ideas find their expression in art and design and have their beginnings in the realms of religious and philosophical convictions. The austerity of a Cistercian monastery or the simplicity of a Zen garden are both emanations of the same urge to reduce, to make clear and to unburden.

"While the Trappists have been around for about 1,000 years and were originally founded in France, Trappists are trying to empty their minds of all clutter, leaving maximum room for the contemplation of God and the spiritual life. They want their physical surroundings to also be uncluttered. Another interesting twist on this whole picture is that the earliest minimalist architecture was inspired by monasteries and the monastic life..."

(Klingensmith, L.A., "Wisdom and Discernment: Timeless Necessities",
<http://www.stmatthewpcusa.org/default.htm>)



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1.3.1 Buddhism as a source of Inspiration to Minimalist Architecture

1.3.1.1 Buddhism

Buddhism was originally an Iron Age old Earth religion, founded on the Gondwana continent of Northern India by a member of a local royal house Siddhartha Gautama, who left his wife, child and political involvement's in order to seek truth as an ascetic mendicant. He studied the various spiritual teachings of his day but ultimately rejected them, and through his own efforts and meditation. He promoted The Middle Way, rejecting both extremes of the mortification of the flesh and of hedonism as paths toward the state of Nirvana. Lord Buddha accumulated a large public following by the time of his death in his early 80's in 483 bce.

The primary guiding principle of Buddhist practice is the Middle Way which was discovered by Gautama Buddha prior to his enlightenment. **The *Middle Way* or *Middle Path* is often described as the practice of non-extremism; a path of moderation away from the extremes of self-indulgence and opposing self-mortification.**

Unlike most religions of Iron Age, Medieval, and Industrial Age Earth, Buddhism does not believe in a transcendent or immanent or any other type of God or Gods, the need for a personal savior, the power of prayer, eternal life in a heaven or hell after death, etc. Instead they affirm karma - the law of cause and effect and dependent origination; reincarnation: the concept that one must go through many cycles of birth, living, and death because of the effects of past karmic action, and Enlightenment or Liberation from the wheel of rebirth: after many such cycles, if a person releases their attachment to desire and the self, they can attain Nirvana.

Nirvana is the extinguishment of all desire, delusion and ignorance. It has been likened to the snuffing out of a candle, where the spirit is freed from all worldly passions; it is the realization that the Self does not exist, and that human desires are empty. An enlightened Buddhist is able to act in this world with complete detachment (without desire), and their actions have no karma. A Buddhist who has attained Nirvana has escaped the world of cause-and-effect (they are free from the cycle of birth and rebirth).

"Central to Buddhism are the Buddha's Four Noble Truths: the universality of suffering (dukkha), the cause of suffering (attachment or craving); the cessation of suffering (final liberation in nirvana), and the way to the cessation of suffering, the Eightfold Noble Path, viz"

(Kazlev, M.A., "Buddhism," <http://www.oriongaram.com/topics/buddhism.html>)

The Buddha taught that in life there exists dissatisfaction / suffering which are caused by desire and it can be cured (ceased) by following the Noble Eightfold Path, and the "Four Noble Truths".

The Four Noble Truths:

Suffering: Birth is suffering, aging is suffering, illness is suffering, death is suffering; union with what is displeasing is suffering; separation from what is pleasing is suffering; not to get what one wants is suffering; in brief, the five aggregates subject to clinging are suffering.

The cause of suffering: The desire which leads to renewed existence (rebirth).

The cessation of suffering: The cessation of desire.

The way leading to the cessation of suffering: The Noble Eightfold Path;

The Noble Eightfold Path is the way to the cessation of suffering, the fourth part of the Four Noble Truths. In order to fully understand the noble truths and investigate whether they were in fact true, Buddha recommended that a certain path be followed which consists of:

The Noble Eightfold Path:

#Right Viewpoint - Realizing the Four Noble Truths

#Right Values - Commitment to mental and ethical growth in moderation

#Right Speech - One speaks in a non hurtful, not exaggerated, truthful way

#Right Actions - Wholesome action, avoiding action that would do harm

#Right Livelihood - One's job does not harm in any way oneself or others; directly or indirectly (weapon maker, drug dealer, etc.) }

#Right Effort - One makes an effort to improve

#Right Mindfulness - Mental ability to see things for what they are with clear consciousness

#Right Meditation - State where one reaches enlightenment and the ego has disappeared

The Dharma, that is, the teaching of Buddha, offers a refuge by providing guidelines for the alleviation of suffering and the attainment of enlightenment.

Apart from other religions Buddhism emphasized its weight on leading a simple life style being sympathetic to all the beings. Buddhism even emphasizes how lay people must lead their lives in day to day practice by providing guide lines in the form of five precepts – “Pancha Seela.” The five precepts are not given in the form of commands such as “thou shalt not ...”, but are training rules in order to live a better life in which one is happy, without worries, and can meditate well.

To refrain from taking life.

To refrain from taking that which is not freely given (stealing).

To refrain from sensual misconduct.

To refrain from lying.

To refrain from intoxicants which lead to loss of mindfulness.



Gautama Buddha is said to have been only the latest of many of these; there were other Buddhas before him and there will be others in the future. According to Gautama Buddha, any person can follow his example and become enlightened through the study of his words ("Dharma") and putting them into practice, by leading a virtuous, moral life, and purifying the mind.



Fig: 20 People in search for calm environment for meditation at present

Source:

<http://www.meditation-vilage.net/dhamma/index.php>

Buddha said that followers should use his teachings only if they help. As such, there is a strong case for the Buddha's teachings being intended as psychological tools, to ease mental distress, rather than as esoteric teachings for the strongly religious. To attest to this, Buddhist meditation, in particular, is now being scientifically studied in the West, both in laboratory tests, and in real-world, hands-on psychiatry.

So Presently, Stressful life style has urge man towards the relaxing mind. In that case "Buddhism" has spread all over the world as a way of understanding uncertainty and living with essentials. So both eastern and western people urge to search for calm environment not only for meditation but also for living places. In Buddhism, Living simple make easy to find way, away from more desires. As less desires make easy the target which of being away from sorrow. Within the complex society, it is fortunate to have few amounts of people who foresee and guide young generation for "reality of life".

The impression of Buddhism in Western people is mentioned in a description to a book called *Buddhism: The illustrated guide*, written by Kevin Trainor, in this way;

"Buddhism is a major spiritual and ethical force in the world today--and certainly one of the fastest growing religions in the West. Its compelling insights into human existence offer an ancient and radical alternative to the materialism of the modern age. More and more people are turning to Buddhism to rediscover the human and the spiritual values they find lacking in traditional Western religions. Buddhism provides a vibrantly written and marvelously illustrated overview of this ancient and yet still vital religion."

(Oxford University Press, "Description," <http://www.oup.com/us/catalog/general/>)

"Buddhism has the characteristics of what would be expected in a cosmic religion for the future: it transcends a personal God, avoids dogmas and theology; it covers both the natural & spiritual, and it is based on a religious sense aspiring from the experience of all things, natural and spiritual, as a meaningful unity"

Albert Einstein - Old Earth physicist, 20th century ce

(Kazlev, M.A., "Buddhism," <http://www.oriongaram.com/topics/buddhism.html>)

1.3.1.2 Buddhism and Minimalist Architecture

As the Buddhism has explained the reality of life and the value of being away from more desires, it gives the sense of being “Simplicity”, which founds for living with essentials.

So the concept of “Minimal” is not a new approach to Eastern people as Buddhism already showed the path for it by giving necessity for simple life style. A simple life style sounds for living with essentials, meanwhile reducing unnecessary ornamentations. Within the complex society people try to give value for “Minimal Living” as they see psychological and physiological difference with compare to normal living which more necessities. **In that case not only Buddhists but also people of other religion urge for “Minimal living”.** As it gives solution for human’s Stressful life style in present situation.

In that point as a concept “Minimilism” get value in the field of residential designs also. As it already contained what is living with essentials. But it doesn’t sound living with in a empty house. It is more than that. Because with less elements it creates esthetic beauty meanwhile adding calmness to living spirits.

So still there are and there were people who understand spirit of living simple. **Thus the quest for simple tranquil lifestyle never died.** It emerged from time to time in different moods. Such as in Art, Music, Drama, Architecture and etc. Some artists/architects got influences from the Buddhism and other religion, when inspiring and simplifying their art works.

“Things that had influenced Tadao Ando’s work and vocabulary of architecture are the pantheon in Rome and “enso”, which is mysterious circle drawn by Zen-Buddhists and symbolizing emptiness, loneliness, oneness and the moment of enlightenment.”

(architecture.sk, “Tadao Ando,” <http://architect.architecture.sk/tadao-ando-architect/tadao-undo-architect.php>)

Clear precedents for Western minimalist interiors can be observed in certain concepts of some oriental philosophies, especially Zen Buddhism. In its quest for the essence of things, and its flight from disorder, Zen philosophy is firmly rooted in the concept of minimalism.

Zen Buddhism, it is often said that the nature of all things is empty (shunya), but this emptiness (shunyata) is not the same as nothingness, because it designates the identity of everything. In this way, this kind of architectural expression and other forms of visual arts are not just a reflection of but the material incarnation of this spiritual emptiness that the Buddhists, and one might also dare to say the minimalists, want to reach.

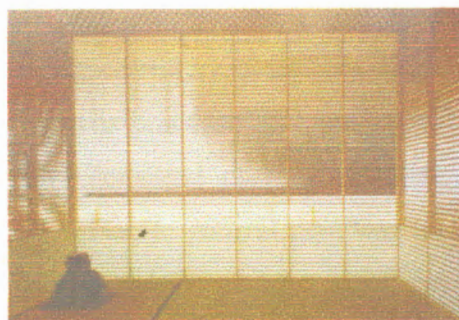


Fig: 21 Interior view of Japanese house, inspired by Zen Buddhism
Source: *Minimalist rooms* (2004)

The Zen lifestyle, the essence of which is reached when the unnecessary is eliminated, corresponds to the philosophy that permeates traditional Japanese houses. The austerity of these houses is not seen as deprivation, but rather liberation of the inner being by banishing disorder, ostentation and variety from our environment. This austerity is perhaps best expressed in the purest style of tea house architecture, whose construction methods, later extended to other types of buildings.

It gave rise to the important style known as “Sukiyazukuri”. However, the original approach claimed not to focus on the building materials but on the emptiness that they contained, resulting in the definition of tea houses as “Houses of the soul” or “Houses of emptiness”. In fact, one can state that this kind of architectural style, principally developed by Zen monks at the end of the sixteenth century, is the only one that can be found before the arrival of the Modern Movement that rejects the incorporation of decorative elements, ostentation and complexity in favor of simplicity and restraint.



Fig: 22 Japanese house, as a echo of its tradition
Source: *Minimalist rooms* (2004)

In the construction of tea houses, known as *chashitsu*, the form derived directly from the function. On the other hand, they were designed to unite a small group of people (a maximum of six) in a relaxed environment around a cup of tea. On the other, their purpose was to aid in the achievement of a profound spiritual satisfaction through the act of drinking tea and silent contemplation.

Some Zen monks brought specific innovations to the tea ceremony. Amongst them, Rikyu considered to be the founder of the ceremony as it is practised in Japan today. Rikyu thought that the proper spirit for the ceremony consisted of four elements: Harmony, Reverence, Purity and Tranquility. He believed that, in general man was too egotistical and worried about protecting himself from others and the world at large. For this reason, Rikyu wanted to create, through the art of tea, an atmosphere of such tranquility that men would feel no threat. Based on this tranquility, each person would obtain an intuitive sense of the harmony that can be found in nature and a purity of heart acquired by an understanding of this harmony. This purity would bestow upon the individual such a state of well-being that it would result in respect for all of nature's creations.



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Consequently, the tea ceremony is a good way of escaping from the wrath and jealousy of everyday life and from the need for self-defense, finally reaching the spirit that transcends the form. What is created in the *chashitsu* is a poem of eternity in the shape of a building.

Another concept inherent in the Zen aesthetic is the words *Sabi* and *wabi*. *Wabi* and *Sabi* refer not only to the quest for the strictest or most "puritanical" simplicity, but also signify freedom from anger, envy and anxiety. *Wabi* can also be understood as an element of renouncement and absence, interpreted in a positive way. When an interior is created with *wabi* and *sabi*, the inhabitant relates intimately with his environment, filling the empty spaces and finishing the composition in his mind, so it becomes a part of him and he a part of it.

1.3.1.3 Asian influence in design

Some things are timeless. The search for inner peace, equanimity, a safe sanctuary is all universal pursuits. And a sense of harmony is the very essence of Asian serenity. A Chinese pagoda, a Shinto temple, a Japanese garden—each is a visual representation of the peace of mind that people search for. Oriental beauty and balance have appealed to the world at large ever since Marco Polo returned to Europe with samples of Asian art. Incorporating an Asian object d’art into a home became a symbol of taste and status in Europe in the 13th century and beyond. In fact, Eastern philosophy and art have an ever-growing presence in today’s architectural and interior design.

Today, many of westerners look to the East, with its well-defined simplicity, for home design. Calmness, lack of clutter, intimate scale, color balance and harmony—all are essential to the Asian way of designing a living space. Well-designed homes are no longer showpieces filled with glitzy furnishings and cluttered embellishments. Now people choose to create a living space where an escape can be made from the hectic pace of daily life to a refuge from life’s chaos. The true purpose of a home is to provide solace and comfort.



Fig: 23 Asian designs - Lunae table lamp

Source:

<http://www.decorandstyle.com/>

"Simplicity and proportion lend tranquility to a home, and Asian styles are well-suited to achieve these results. Balance and minimalism combined with effective use of color and texture are the keys to designing in the Eastern tradition."

(Wilson, S.K., "The Zen of simplicity", <http://www.decorandstyle.com/july2006/>)

According to Eastern religions and philosophies such as Buddhism, Taoism, Shintoism and Feng Shui, moderation and restraint are goals for life. Simplicity is the core to Oriental design.

1.3.2 Nature as a source of Inspiration to Minimalist Architecture

More than that, the inspiration of nature in all human creations, should not be let behind. As nature is the teacher who taught us most of lessons in our lives. Also the sun moon, the sky stars, the sea, rivers, mountains and all components of nature would be man's primary aesthetic experience. As minimalism is considered to achieve maximum quality or the perfection with minimum elements, nature inspires this on many occasions.

"Art imitates nature in her manner of operation"

(Coomaraswamy, 1956, p67)

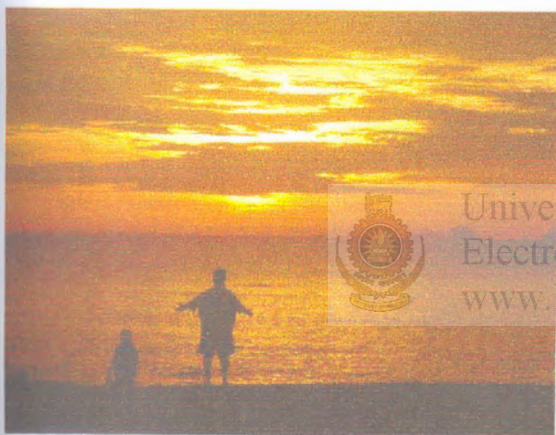


Fig: 24 Nature with minimal elements it creates enormous effect by resulting calm and tranquility.

Than being in a built space being in a natural surrounding make people happy and it minimize stress of day to day life. That is why people urge to go and see such places. The miracle behind this is the calm perfection and tranquility of nature's creations. Though the minimum elements it create enormous effect in our eyes. So nature gives the basic lesson of what minimal esthetic is. Not it is mainly the reduction but creating maximum

effect with the aid of essentials. Also when compared Buddhism with the nature, Buddha has presented the necessity of protecting and gratituding nature. As Buddha gratituted the "Bo tree" which sheltered him when gain the enlightenment

Early people knew that their exisitance depend on the way, they react to natural environment. Their life style were simple and blend with nature without making harmness to the nature. So their dwellings had no or minimal effect to the natural setting.

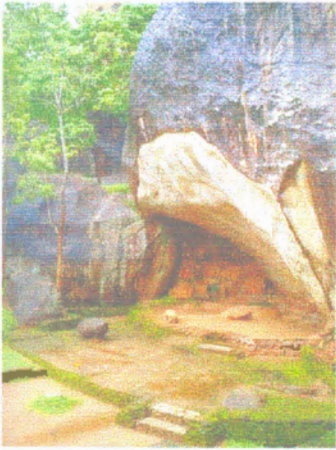


Fig: 25 Sri Lankan Monk dwellings at Sigiriya.

Source: <http://www.niksula.hut.fi/~ajkangas/srilanka/>

Monks (The followers of “buddha”) spent most simple life style when compared with layman. Though the needs of layman changed with the time still there are monks who prefer most simple life style within a natural setting. Beacause there is no place comparable to natural setting to have calm environment for meditation. Likewise people used to live with essential without bothering on unnessesary things as they knew the uncertinty of every thing according to the Buddhism. Also when they did any development it wasnot threat to nature.

Also as today most designs were inspired from the nature. But the diference was, people took things without making enormous effect to the exsisting natural environment. The early designs are proof of their creatve minds and positive thinking towards the buddhism.



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“Feng Shui is “the art of placement.” Feng Shui, which originated in China, is based on the arrangement of things to accommodate the best flow of Chi, energy. Feng Shui follows a color theory attributing particular emotions to particular colors. Red is the color of fire and is believed to energize and excite. Blue is the color of water and has a soothing effect. Green is the color of growth and is thought to be uplifting. Yellow is the color of earth and exudes power. Neutral colors are part of the simplicity and minimalism of Asian style. These colors promote tranquility. White or neutral upholstery and linens enhance serenity. ”

(Wilson, S.K., “The Zen of simplicity,” <http://www.decorandstyle.com/july2006/>)

Also artifact of the religious places and palaces of early kings have been created in manner which is well blend with the natural setting. When visit such place, it can be seen that buildings of a religious place have been created without breaking the calmness of existing natural setting. It shows how early people treat nature while fulfilling their needs for architecture. The ways people inspire a specific religion also depend on the creations of the followers of that religion. Because those are only evident to see how early people's life-style was.

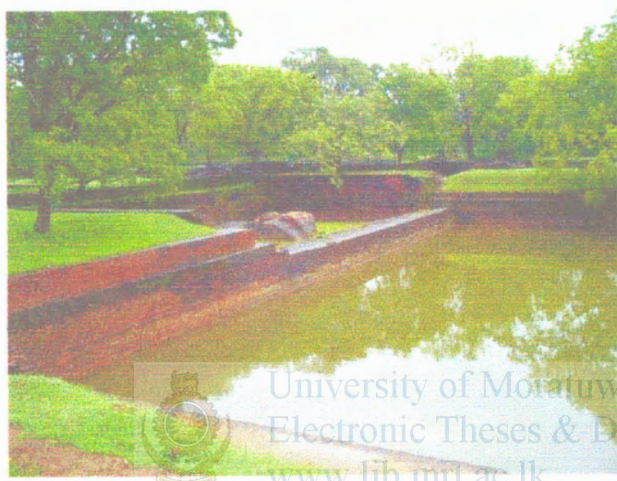


Fig: 26 Water gardens at Sigiriya.

Source:

<http://www.niksula.hut.fi/~ajkangas/srilanka/>



Early artists with less technological equipments, created still- unexplainable designs such as water system of Sigiriya, pyramids and etc. Since early inspiration from nature is common in creation of artifact. As it with minimal elements make enormous effect as a scenery or view.

2.1 RESIDENTIAL ARCHITECTURE

2.1.1 The concept of “House”

The concept of house has a deeply rooted attachment between man and the place and it is a place, which reflects his values, aspirations and future expectations as well as each person's social cultural identity.



Fig: 27 House is a visible symbol of its occupant's identity.

House was a very basic need even in the primeval ages, prehistoric man utilized tree shelter, cleft in trees and caves, to get shelter against natural phenomenon like sun, rain, wind and protection from external force like wild beasts. As they got used to obtaining such shelter for prolonged period of time, change into more comfortable personalized

place to suit their needs. They preferred a shelter, which offered, facilities for rest and sleep in addition to protection and enclosure. To prepare their foods and to store things they sought some extra spaces thereafter.

The concept of basic shelter, expanded over long period of time to gain physical comfort by exercising control over existing conditions. They tried to enclose their spaces in proper manner and with permanent materials and they learnt to modify the structure of their dwelling place. As much as a person proud of his family in his collections, his tools and his animals, he began to proud of his dwelling too.

Thus the house a person builds embodies certain features that are in effect outlets of owner's character. In creation of domestic architecture, a person's character is initially fashioned by the inherent views and attitudes, activity pattern, life style, of the community which he was born in and the cultural frame work of that specific social group. House is a medium through which a person gives expression to himself.

Considering the importance of house it expresses the self of owner in the sense of privacy, security, territoriality and identity which are some human qualities and psychological needs and are given through physical form and the internal space making of house. In creating livable spaces of a house, gives the feeling of personalization of its owner. Though the house is with facilities, People feel more comfortable by living in their own place than living in other one's place.

"A house is the visible symbol of a family's identity; the most important material possession a man can ever have the enduring witness to his existence"

(Hássan Fathy; 1976, 133)

2.1.2 Housing in present urban context

With urbanization rural people sought employment, money and social mobility in urban areas and profession, status became an important factor in life. Therefore many urban centers were emerged all around the country and people migrate from various rural areas to these centers finding new job opportunities in the aim of having better living standard. The increase in demand for

land in urban context, due to rapid growth of population and urban migration added new dimension to the transformation of domestic buildings. Vertical developments take place while letting some people to satisfy on small size of land as most are not affordable to high value of lands with comparison to their income level.



Fig: 28 Living in urban context



Fig: 29 Moods of entertainment enhance stressful life style
Source: <http://www.niksula.hut.fi/~ajkangas/srilanka/>

In the 21st century world has become a very congested and busy place, in which people work like machines. As a result mentally stressed and physical exhausted people have increased over the last few decades. Also the ways people entertain themselves enhance stressful life style.

Though there are calm places for relaxation, people find it difficult to visit them due to insufficiency of time. In other hand most people

have no sense where they are and what they do. As they are in a big race to the horizon without facing reality. But the people who have understand the sense of life try to get out of this monotonous way of living. Meanwhile “meditation” as a mind relaxing way has been spread out.



Fig: 30 Meditation for stressful life style.
Source: http://www.Jeben-sterben.de/center_meditation_en.htm

However “House” is the place where every person stops after the end of the day. The house has been considered the spiritual core of a person. Most of the time in a person’s life is spend in a house. According to present stressful life style House should be a place of tranquility, for the mind of the dweller. Also in the case of house in a small plot of land has big issue on what kind of house it should be. Because physical and psychological comfort

really matter than living in big plot of land. As such, the concepts of minimal architecture, reveals the way of enhancing the spaciousness and facilitate a sense of liberation. For such kind of life enhancement and to facilitate meaning full architecture, minimalism is the appropriate design approach, especially in tight urban context.

2.1.3 Space crowding and tight space

2.1.3.1 The concept of space in architecture.

"Man being is living organism requires certain needs to be satisfied to survive in the environment. Architecture is essential product of human life. Architecture enhances the character of the place. In relation to human body has added value. Meaningful orchestration of space reflects the architectural space."

(Noberg – Schulz, Towards a Phenomenology of Architecture, 1980, p13)

The concept of space is complex. Experience of it is even more complex because of the quality of the experience itself. Architectural space is that, space which is deliberately created to provide either a fresh meaning or to emphasize an existing meaning in a lived in space. People of a particular cultural group experience the spaces. Simultaneously, they also experience the spaces created by architecture. They are three – dimensional physical spaces with in and among buildings. These volumes that are created by physical elements indicate spatial expressions of the created space.

People's individual ideologies may differ from one to another in understanding Architectural space. People experience the space created with physical forms according to their attitudes, interpretations, acceptance, values and aspiration in relation to their society. The meanings and expressions created by such spaces are the values of that society.

"If we look at the concept of space we see that its extension is boundless, that is, it becomes, outer space. It is this extension and the inability to perceive boundaries that forms one extreme of a pair of opposites. The other opposite to boundless space is naturally space that has definite boundaries. It is this realm and its relationship to the boundless extension of space that architecture concerns itself with."

(Merkus, E., An Introduction to the Psychology of Architecture, [http://www.](http://www.Jungdownunder.com/psych_arch/psych_arch.htm)

Jungdownunder.com/psych_arch/psych_arch.htm)

2.1.3.2 Spatial Quality

A human being is said to be a creature particularly sensitive to his surrounding physical environment in which he dwells, when space is encapsulated and coloured with, human feelings and emotions. Spatial quality is defined as a character of a space, the feeling it would evoke in a persons mind, the effects it would have on the behavior of a person in the space.

2.1.3.3 Form & its Relationship with Space & Spatial quality

When consider the spatial quality, form of the space and its shape is extremely important.

"With reference to architecture, there cannot be anything more natural than to start with the visible form and then gradually penetrate into the realm of the invisible. Space is the invisible realm that dwells as its inseparable companion, the visible form. In experiencing architecture, it is the visible form that a person confronts first, before capturing its underlying reality, the space".

(Oswald, 1986)

Therefore the plan form and three – dimensional form play the major role to achieve spatial quality. Colours, textures, Materials and element details contribute to enhance spatial quality.

"Shape is the primary means by which we recording and identify the form of an object. Since it can be seen as the line that separates the form from its background. Our perception of form and shape will depend on the degree of visual contrast between the form and its background".

(Ching F.D.K., Architecture: Form Space and Order, 1979)

Colours, textures, light, materials and element details can be considered which make the shape of a form.

2.1.3.4 Tight space in urban context



Fig: 31 People crowded in urban centers

Source: Minimal architecture (2003)

During the late twentieth century the Demographic explosion caused many problems one of them being crowding. The general belief on the matter is that crowding is associated with high – density situations and that it is a negative phenomenon. In an analysis of crowding it can be seen that crowding is primarily a psychological phenomenon with behavioral implications of Universal situational and personal components. The crowding spatial interface brings out the concept of tight spaces.

2.1.3.4.1 The significant of tight space and its livability

Tight spaces are primarily function of both physical and behavioral components. Dwellings, which are in contrast to the spaciousness of environment, will give a feeling of tightness. The feelings of tight space dwellings have implication on setting in which it is located.

Livability is totally a psychological concept. It emerges in the mind due to the act of living satisfaction. It is a quality of experience given through the relationship between man and the physical environment. Further it is not only a matter of what is physically there in the experienced environment but also it is something more than that. It is a combination of both the physical and psychological attributes and human functions.

As minimal living gives the best solution to enhance physical and psychological comfort, it appropriate for residential in tight space. Minimalism is not just attractive but also environmentally savvy and practical.

Minimalist architects have shown how it well suit to such tight environment in urban context. The resulted environment from “Minimal concept” gives both physical and psychological difference to its user. But here the psychological difference is the virtual than others.



Fig: 32 Exterior view of Azuma House in Sumiyoshi, Japan.
Source: Minimal architecture (2003)

First Tadao Ando’s realization was Raw House in Sumiyoshi, Osaka in 1975. This mentioned building was a simple block building, inserted into a narrow street of raw houses. This residence is immediately noticeable because of its blank concrete facade punctuated only by doorway. The whole object space is divided into a three equal rectangular spaces, while the central part is atrium. The space nearest the doorway contains the living room at ground level, and the bed room above. The last final space contains the kitchen and bathroom below, and the master bedroom above. Build in the wooden residential area above the port city of Kobe.

Another example is curtain wall House in Itabashi – Ku, Tokyo (1995) done by Architect Shigeru Ban. Within the tight urban setting, it has make different meanwhile giving physically and psychologically appropriate living condition to the user. By drawing it’s curtain the inhabitant can determine whether the act of living is to be conducted inside the boundaries of his townhouse or to become part of public street life in the neighborhood.



Fig: 33 View after drawing the curtain- Curtain wall house, Itabashi – Ku, Tokyo, Japan 1995
Source: Minimal architecture (2003)

“The work of Shigeru Ban must look like the ultimate incarnation of minimalist architecture, after all here reduction appears to penetrate to the very bones of architecture.”

(Ursprung P., Sachs, A., & Ruby, A., Minimal Architecture, 2003, p122)

Architecture is more than a visual art. Architecture has to be inhabited. Hence, breaking away from excess is some what complex. Achieving minimalism in architecture is therefore will have to be subject to certain disciplines, according to which the strategies will be formulated. Meanwhile the application of “minimalism” among architects is quantitative aspect as it can be less or more.

Though “minimalism” is difficult to insist on one correct definition, it seems clear that in general use minimalism has been reduced to a series of fairly basic concepts revolving around simplicity, identity of material and absence of decoration. Minimalism has become a universal art, because its constituent parts seem to ‘slot in’ to any cultural context. Simplicity, clarity, abstraction, austerity and tranquility are some general characteristics of minimalism.

It is virtual to consider why minimal architecture is well suit for tight plots than going for other architectural concepts. Normally within a tight plot, designers try take possible maximum advantage from the space. But it rarely ends up with good place for living. As it only result little spaces with a big allocation for family goods. But the concept of house depicts value, more than being storage for family goods. As physical and psychological comfort, really matter in a tight space.

So living with essentials that are created within a tranquil environment is the best solution for tight plot. In that case “Minimalist architecture” well-suit for residential designs in urban tight plots.

“Minimalism in architecture is a working method in which aesthetic force and capacity are employed to create an effect that astonishes without the aid of superfluous elements. Its essence can be found in the Mies van der Rohe edict, “less is more”, and its intention is to accommodate life simply but beautifully.”

(Bertoni, F. Minimalist Architecture, 2002)

2.2 CHARACTERISTICS TO ACHIEVE SPATIAL QUALITY OF MINIMALIST ARCHITECTURE

“For John Pawson: “Architecture is about space; space qualified by light, geometry and repetition... ..with the key element being restraint.” And restraint is something he takes very seriously indeed.”

(Ypma, H., London Minimum, 1996, p131)

2.2.1 Simplicity

The concept of simplicity has a long history, as the lord Buddha is the first one who explain the value of spending “simple life style” to a layman. Then it emerged from time to time in different moods. Such as in Art, Music, Drama, Architecture and etc. In different words; reduction, cutting off ornamentation and functionalism, it gives the idea of “simplicity” in Minimalist architecture. The concept of simplicity has always offered a sense of liberation, a chance to be in touch with the essence, rather than be distracted by the trivial. To build simply, to design simply is, both in theory and practice, an extremely complex undertaking.

“Simplicity of shape does not necessarily equate with simplicity of experience; as Robert Morris said.”

(Ursprung, P., Sachs, A., & Ruby, A., Minimal architecture, 2003, p8)



Simplicity enhances the quality of space creating visual comfortable.

Fig: 34 Aesthetic and simplicity.

Source: <http://www.nzhouseandgarden.co.nz/Articles/ManhattanMode.asp>

It is about space, with catering for function; without ornamentations.



Fig: 35 A bedroom is dominated by a piece of mini- architecture.
Source: <http://www.nzhouseandgarden.co.nz/Articles/ManhattanMode.asp>

"Architect Richard Priest says "My approach to minimalism is quite simple. Conceptually you begin with a collection of information about the design. From the brief, the site, materials, aesthetics. Out of this complexity you begin to remove until you come up with a refined simple form. This continues throughout the design process, down to the smallest detail. The extraction is the most challenging art which results in making the aesthetic quite pure."

(NZ House & Garden, Mastering Minimalism, <http://www.nzhouseandgarden.co.nz/TVArticles/MasteringMinimalism.asp>)



To create an effect that astonishes without the aid of superfluous elements.

Fig: 36 A dining, including less decorations.
Source: <http://www.nzhouseandgarden.co.nz/Articles/ManhattanMode.asp>



"It was a sense of the oppressive weight of possessions that gave me my first taste for simplicity," says Pawson in his collection of musings.

(O'Flynn, M., Less is more, <http://www.findaproperty.com/>)

Architect John Pawson's own house in London's Notting Hill is the best example for a paragon of reduction. There are no paintings, pictures or drawings on the walls; no rugs, carpets or mats on the floors; no curtains, drapes or shutters on the windows. No visible taps, switches, latches or knobs. No skirting boards or doorjambs. No sofas, easy chairs or daybeds. No books. No antiques. No things. Just space and light. All symmetry and geometry in eye-soothing shades of blond and white. Pawson has used his house as an arena, a place to push the envelope of reduction even further.



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Most pronounced of Pawson's house was the choice of floor. The bed, stools and 10-foot dining table were made on site. A row of pivoting doors conceal storage space.

Fig: 37 John Pawson's own home, a Victorian terrace in London's Notting Hill
Source: London Minimum (1996)

"people think minimalism is an interior fashion, but it's more than that - it's an architectural approach to living."

(O'Flynn, M., Less is more, <http://www.findaproperty.com/>)

To result “Simplicity” as a whole, it is necessary to cater each smallest detail in simple way.



It is the skill of designer to hide what make the space complexity meanwhile filling the space with simplicity in Minimalism. As essentials should be in the house, but the way those are located is the miracle.

Fig: 38 Bed room at Mount Eagle,
designed by John Pawson.
Source: London Minimum (1996)



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Clearly simplicity has dimensions to go beyond the purely aesthetic. It can be seen as the reflection of some innate, inner quality or the pursuits of psychological or literary insight in the nature of harmony, reason and truth.

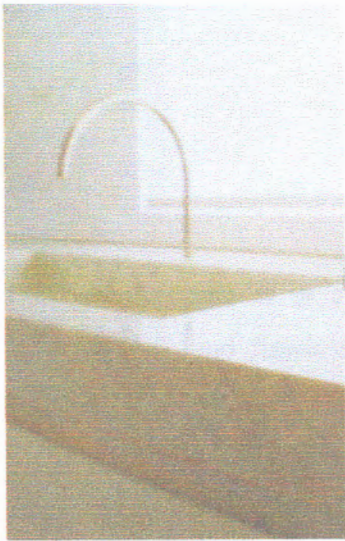


Fig: 39 Kitchen counter top at John Pawson’s
own home, in London’s Notting Hill
Source: London Minimum (1996)

2.2. 2 Clarity

"Ray key is a wood-tuner. A poet in wood. Using nothing more than a single material and a simple shape, he makes items of exquisite beauty. Like the writer who can muster emotion from the right words used sparingly, Key can create visual drama with a single block of wood. His pieces have the power of clarity. Looking at them, the entire notion of minimalism becomes much easier to understand."

(Ypma, H., London Minimum, 1996, p117)



Fig: 40 Ray key's bowls epitomize the minimal approach to design
Source: London Minimum (1996)

By eliminating all distractions Ray Key allows the true attraction of the material to surface. All the natural, inherent beauty that wood has to offer is magnified by the completely naked honesty of his work. Pared down to a point where it can no longer be improved upon, its beauty lies purely in its shape and the quality of the material itself.

Yet Key's is probably the most demanding of paths to choose because it is so unforgiving. There is no room for mistakes. The work must be precise and flawless, otherwise the eye is distracted. In Japan they have a word for it, *Wabi*, a word that literally means 'voluntary poverty'. It derives from the teachings of Buddha which specify that man should strive for 'poverty', in the sense of being 'thingless', because to be thingless is to possess the world. For a bowl or whatever object to have *Wabi* it must be pure – in form, material and execution. In Zen philosophy, the ultimate goal is 'stillness and simplicity'.

Clarity is the legibility of a built form. In experiencing, it becomes utmost important as it facilitates the beholder to read and understand easily, the expression of a built form. Once the design is reduced and simplify, at a glance there is less and less to look at. With reducing and compromising, it comes to a point at which it results enough clarity, not just emptiness, but a sense of richness. Through such emptiness, expected spatial quality would appear. There is an excitement of empty space. It has capacity to bring architecture alive. As emptiness allows user to see space as it is.

"Emptiness allows us to see space as it is, to see architecture as it is, preventing it from being corrupted, or hidden, by the incidental debris of paraphernalia of every day life."
-John Pawson

(Bertoni, F. Minimalist Architecture, 2002)

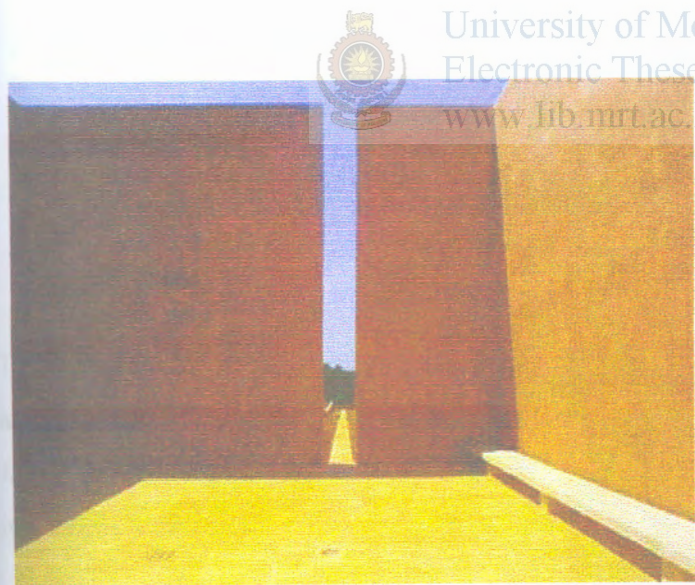


Fig: 41 Neuendorf House, Mallorca 1989

Source: <http://www.arcspace.com/index.shtml>

2.2.3 Tranquility

Utter simplicity of forms, homogeneous materials, pure and monotone colours produce an austere mood and tranquil order. Further the use of light and shade, it enhances the tranquility.

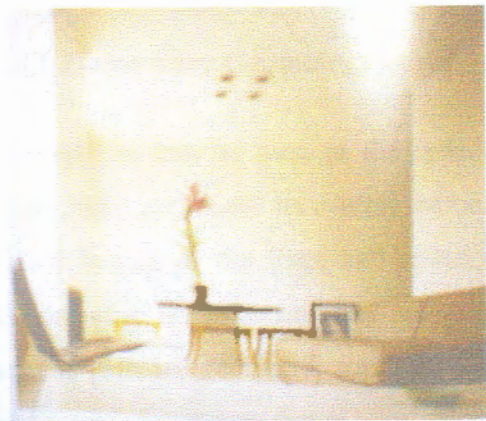


Fig: 42 Living/ dining room with minimal decorative elements

Source: Minimalist rooms (2004)

The decorative elements are minimal. However, they have been perfectly selected. (Fig 21, 22) In the living/dining room the decorative elements have been reduced to a minimum in order to create a restrained ambience that transmits tranquility.

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The furniture reflects the different ambiances. The bedroom furniture has a Japanese influence. The atmosphere is imbued with serenity.

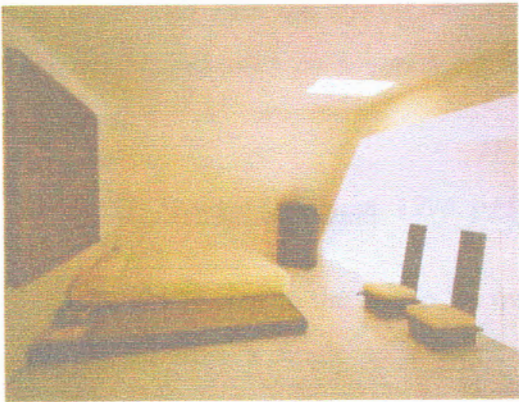


Fig: 43 A bed room with minimal elements
Source: Minimalist rooms (2004)

2.3 ENHANCEMENT OF SPATIAL QUALITY IN THE MINIMALIST SPACE

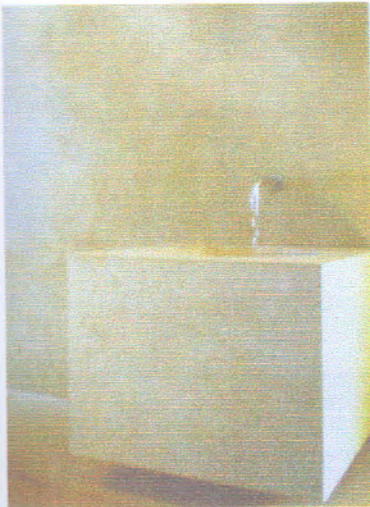
Elementary Geometry, colours, light, materials, textures and details become the fundamental elements that give significance to the minimalist space.

2.3.1 Elementary Geometry / Form

Minimalism can be seen as the reduction of architecture to its most basic concept of space, light and mass. Its central theme is not elimination of ornaments but celebration of naked beauty of the form and space. Therefore, simple and understandable geometry important to facilitate minimal architecture. The most simple and unified configurations are the primary geometric forms or the mathematically ideal forms. Those have a calm and sense of response that is missing in more complicated or less pure forms.



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"Le Corbusier once said that the eye is naturally drawn to geometric shapes such as squares, circles, spheres and pyramids."

(Ypma, H., London Minimum, 1996, p138)

John Pawson has put this theory to the test in his own house. The sink is cut from a single solid block of stone.

Fig: 44 Sink, cut from stone-
Pawson's house in London's
Notting Hill
Source: London Minimum (1996)

2.3.1.1 Two Dimensional Form

The plan form is the two dimensional composition of a building.

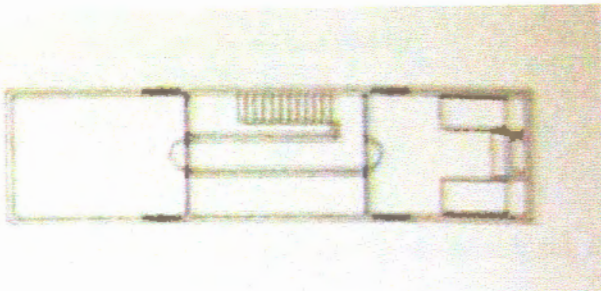
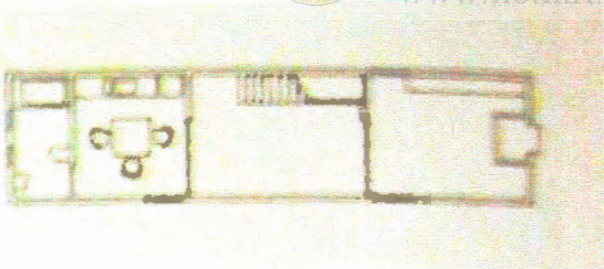
"The principles of composition involved in the production of a good plan may be considered from two different points of views; that which is concerned with abstract design, and that involved in the study of practice requirements. The seconded aspect is however related to the first, since a good plan is not only one in which all practical and functional requirements are fulfill, but one which result in the production of a architectural composition having the abstract qualities necessary to awaken the aesthetic and emotional sense of the be holder. "

(Robertson. H., The Principles of Architecture Composition, 1924)

Plan form is extremely important to identify whether it has a minimalist approach or not. Simplicity, clarity and elementary geometry of the two dimensional form can be identified easily.



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Minimalism as an approach which caters for essentialities, minimalists uses few essential walls to exaggerate the clarity of the two dimensional form, avoiding unusable edges and concerns, with odd shapes.

Fig: 45 Plans of Azuma House in Sumiyoshi, Japan 1975-76- Tadao Ando
Source: *Minimal architecture* (2003)

By analyzing minimal 2D forms, could be identified a separation between private and public areas of the house. It is easy to cluster private space in one segment, as a result, automatically get large open volumes without any distraction and visual disturbance. Sense of wholeness can be achieved. As a result unnecessary corridors spaces and passages can be minimized.

It can be found composition of primary geometric forms (specially square and rectangular forms) in plan arrangements of most minimal designs, rather than using complicated shapes like octagonal, hexagonal or unusable shapes.

2.3.1.2 Three Dimensional Form

Three dimensional forms can be identified as volumes. (Length, breath and height)



Fig: 46 Degelo, Haus Muller, Switzerland 1988-99
Source: **Minimal architecture (2003)**

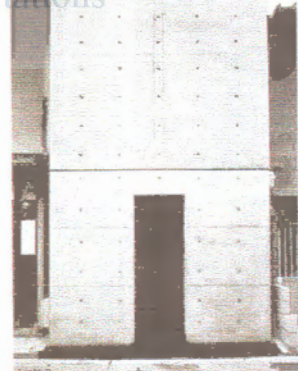
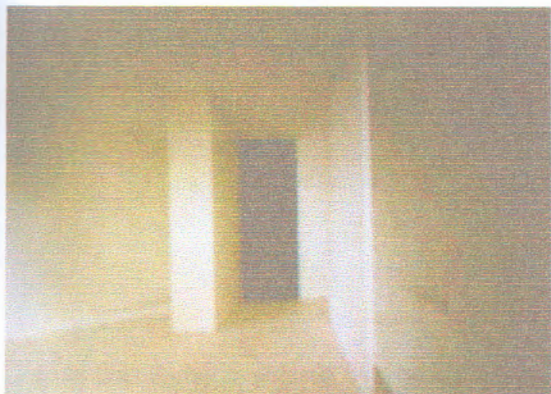


Fig: 47 Tadao Ando
Azuma House, Osaka 1975
Source:
<http://www.arcspace.com/index.shtml>

With different principles of three dimensional form, it can be achieved minimalism.

(A) Unity and Architectural Composition to achieve Minimalism



Architecture deals with composing set of elements or spaces in a particular manner to create an intended expression. The act of composing spaces or elements should be governed by a certain set of principles, so that the intended expression is created while preserving the unity of the composition.

Fig: 48 Composition of simple geometric forms
Source: **Minimalist rooms (2004)**

The unity is the quality of “one ness” in a composition, which is created, when the proper relationships existed between the different elements and the composition as a whole.

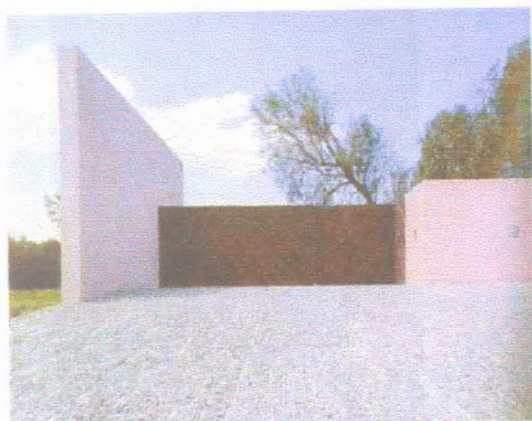


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(B) Balanced Composition to achieve Minimalism

Two elements similar in size and shape might look different in weight, and at the same time, two different elements dissimilar in size and shape might look similar in weight. The apparent weight of an object determined by its properties such as scale, colour, textures, etc are the tools, used to achieve unity in this particular type of composition. By using these tools, a composition can be created where dissimilar elements are delicately balanced about a particular axis. This balanced distribution of elements aided by inflection creates a sense of presence of the principle axis in the composition. The ability to sense the presence of such an axis aids the perception of the various different elements together in a unified whole.

Axis- A line established by two points in space, and about which form and spaces can be arranged



"In the gardens and homes I have designed, I have always tried to allow for the interior placid murmur of silence, and in my fountains, silence sings."
Luis Barragán

(Bertoni, F., Minimalist Architecture, 2002)

Fig: 49 Luis Barragán - Master Plan for Los Clubes, Service Entrance, Mexico City 1968
Source: <http://www.arcspace.com/index.shtml>



(C) Scale and Proportion to achieve Minimalism
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Simplicity in minimalism is closely associated with scale and size. Scale brings man directly with it, since experience is always linked with him.

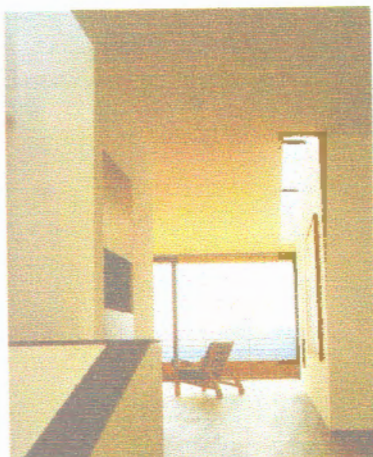
The scale refers to the size of something when comparing with the standard or another. The proportions allude to proper relation of one part or to the whole.

"While scale alludes to the size of something compared to a reference standard or the size of something else. Proportion refers to the proper or harmonious relationship of one part to another"

(Ching, F., D., K., *Architecture: Form Space and Order*, 1979)

"There can be no real beauty without singularity of proportion" - Edgar Allan Poe

(Ypma, H., London Minimum, 1996, p117)



Scale is a dialogue between man and object.

Fig: 50 Simplicity, closely associated with scale and proportion
Source: **Minimalist rooms (2004)**

(D) Rhythm and Repetition to achieve Minimalism



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Rhythm refers to the regular or harmonious recurrence of lines, shapes, forms or colours. It incorporates the fundamental notion of repetition as a device to organize forms and spaces in architecture. Almost all building types incorporate elements that are, by their nature, repetitive. Beams and columns repeat themselves to form repetitive structural bays and modules of space. Colours and windows repeatedly puncture a building's surface to allow light, air views and people to enter its interiors.

"Composition that is based on a large degree of repetition tends to exhibit the quality of simplicity. Principle of rhythm/ repetition is, the use of recurring patterns, and their resultant rhythms, to organize a series of like forms or space"

(Ching, F., D., K., Architecture: Form Space and Order, 1979)



Repetition of Paper tubes which are entirely prefabricated and assembled on site, allows for an “instant architecture”.

Fig: 51 Shigeru Ban – Miyake Design studio Gallery, Shiwuya – Ku, Tokyo, Japan 1994

Source: **Minimal architecture (2003)**



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Minimalist box with Repetition of colour, reflect the context of its particular environment.

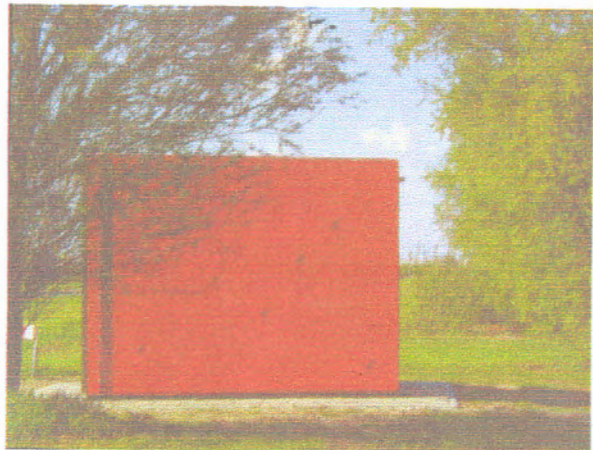
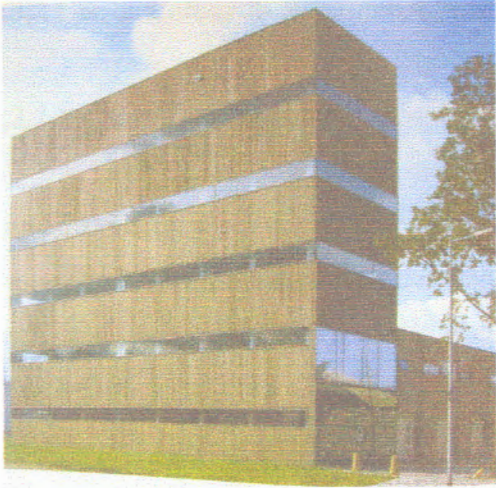


Fig: 52 PTT Telecom Switching Stations, Amsterdam, The Netherlands 1995-97

Source: **Minimal architecture (2003)**



Simplicity derived from the repeated forms of strips of wood and horizontal glazing, within the pure geometry.

Fig: 53 Eurotwin Business center, Amsterdam, The Netherland 1992-93

Source: Minimal architecture (2003)

Much of the visual power of Stonehenge lies in its repetition of simple, massive monolithic forms. It demonstrates that extremely large structures can have the quality of simplicity, as much as small ones.



Fig: 54 Repetition of simple, massive monolithic forms

2.3.2 Use of Colour in Minimalist Space

2.3.2.1 Colour and Perception

In 1666, English scientist Sir Isaac Newton discovered that when pure white light is passed through a prism, it separates into all of the visible colors. Newton also found that each color is comprised of a single wavelength and cannot be separated any further into other colors.

"When a ray of light falls on an object, part of it is absorbed and part of it is transmitted and part is reflected. Colour of the reflected light is the colour of the object as perceived by the eye"

(Miller S.F., Design process, A primer for architectural and Interior Design, 1995)

It can be said that colour is the essence of light and that light is the essence of life. But colour perception is a subjective experience, due to the fact that it isn't a material attribute, but a sensation produced by the reflection of light, which is transmitted to the brain by the eye. Thus, the colour of an object is the result of the change experienced by light when it is reflected. The perception of colour provokes different reactions in each person, depending on a number of interrelated factors that are generally associated with cultural inheritance and experience.

(a) Psychological effects of colour

- *Colour has Dimension* - Colour can make an object appear larger or smaller.
Light colored object appears larger than a dark colored object.
- *Colour has weight* - Colour can make an object lighter or heavier. A pastel colour object will appear lighter than a similar object in dark colour.

- *Colour has movement* - Colour can make an area or object appears nearer or further away. Light Blues & Violets tend to recede and bright or dark colours appear to advance. This aspect is of value in decorating through illusion of making a small room appear larger or a large room seems smaller by simply changing the colour.
- *Colour has temperature* - It can create the impression of warmth and coolness. Blues and Greens appear cool and Yellow appears warm. Dark Colours absorb more heat-rays.
- *Colour can create identity* - The use of colour in trade mark products and corporate image is wide-spread.



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(b) Psychology of colour

The way each user interpret or feel about colour can vary because of user's experiences with colour, education of colour and their cultural associations with colour. So the psychology of colour is a valuable tool the designer can use to fulfill the needs of the users.

It is **generally** found that:

RED: Associated with: danger, passion, energy, warmth, adventure, optimism



Fig: 55 Living with Red

Source:

http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml

ORANGE: Associated with: stability, encouragement, warmth, and is thought to aid digestion



Fig: 56 Living with Orange
Source:
http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml

PINK: Associated with: Cheerfulness, youth, festivity



Fig: 57 Living with Pink
Source:
http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml

GREEN: Associated with: Refreshness.



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Fig: 58 Living with Green
Source:
http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml

BLUE: Associated with: calming and soothing; promotes intellectual thought;



Fig: 59 Living with Blue
Source:
http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml

YELLOW: Associated with: Cheers. It enhances concentration.



Fig: 60 Living with yellow

Source:
http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml

PURPLE: Associated with fertility, joy.



Fig: 61 Living with Purple

Source:
http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml



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BLACK: Associated with: death, eccentricity, drama. It's a non-colour that absorbs colour and reflects nothing back.



Fig: 62 Living with Black

Source:
http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml

WHITE: Associated with: innocence and purity, Sterility.



Fig: 63 Living with White

Source:
http://www.bbc.co.uk/homes/design/colour_psychologyofcolour.shtml

2.3.2.2 Minimalism and Colour: Expressive Simplicity

Colour plays an essential role in creating more “human” environments that respond to the need to live surrounded by colour. The direct and unmistakable perceptions conveyed to us by the brushstrokes of colour contrast with minimalism’s particular lightness of shapes and forms, which at times appear to be diluted in space. When minimalism and colour are united appropriately, and in just the right does, the results are compositions that produce harmony derived from the order of the parts. In these interiors, it looks as if nothing could be added or removed, because everything fulfills a determined function.

The position and proportion of different objects, of the empty spaces between them, and the distribution of colour appear interrelated and form a compact whole. The distribution of these objects and colours must achieve a dynamic composition that transmits some tension when viewed, in order to avoid the monotony or boredom.



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Colour in minimal is important aspect due to its psychological effect on the interior. So creating calm environment with essentials is not simple work of art. The esthetic beauty depends on how designer has break the monotonous meanwhile catering for essentials.

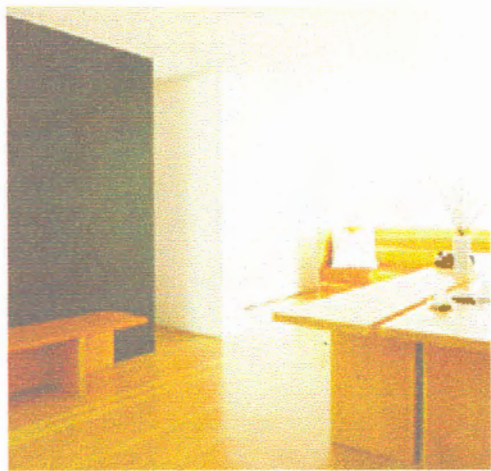
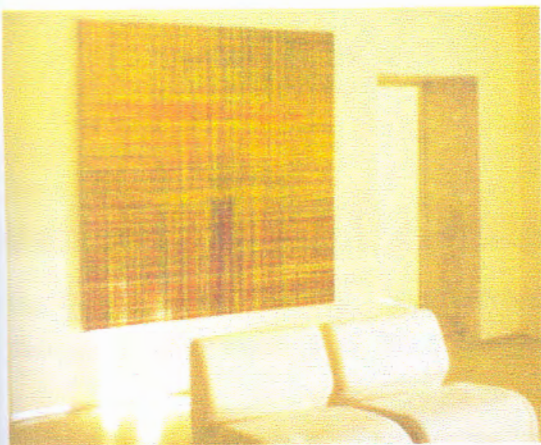


Fig: 64 Notting Hill home, London

Source: <http://www.findaproperty.com/>

Minimalism implies an effort of reduction, which leaves only the indispensable, only the essence. Everything else is superfluous. And within this search for pure and naked geometric forms, colour plays a predominant role because of its undisputed descriptive capacity, and the narrative discourse that it transmits in an implicit, unconscious, connotative way.



The introduction of vibrant colours in a room, whether through furniture, art works and painted walls, add touches of visual impact that, in addition to bringing life to the atmosphere break up the characteristic neutrality of the minimalist style.

Fig: 65 Art work within a living
Source: Minimalist rooms (2004)

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"The minimalist influence contrasts with the explosion of form and colour in the art work."

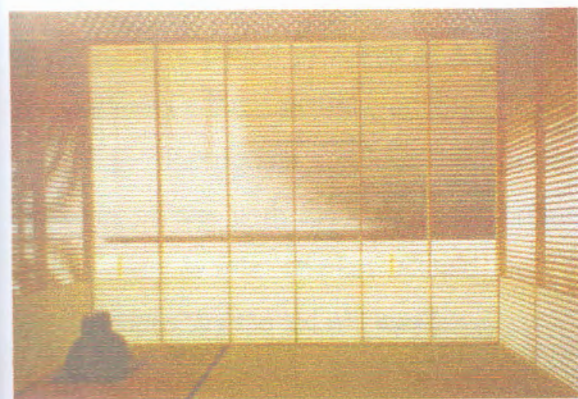
(O'Bryan, L., Minimalist rooms, 2004)

The contrast between the colored elements and the immaculate white walls give the space a great expressiveness.



Fig: 66 Dining - few colours contrast to white.
Source: Minimalist rooms (2004)

Even Zen defends the introduction of colour in interiors, because of its concentrated individuality and its specific attributes, like the properties that a spice can add to a dish.



Japanese houses inspired by Zen Buddhism, used monochromatism specially, earth colours and natural materials to blend the interior with the environment.

Fig: 67 Interior of Japanese house – using earth colours.

Source: *Minimalist rooms* (2004)

"The window becomes a picture in the tradition of the Japanese technique of Shakki, or integrating the landscape into the architecture, establishing a relationship between nature and culture."



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(O'Bryan, L., *Minimalist rooms*, 2004)



Fig: 68 Using earth colours in integrating the landscape into the architecture.

Source: *Minimalist rooms* (2004)

In an ambience characterized by emphasis on the fluidity of light and space, the subtleties of colour take on special importance, showing the infinite effects produced by the variations of the textures.

With the light falling to colour of a surface, it enhances the spatial quality. Here selecting appropriate colour to make different effects with the light is important aspect. Meanwhile attempt should be to create “more” by the aid of “less”.



Fig: 69 Effect of light on the coloured surface in creating Calmness

Source: Minimalist rooms (2004)

In minimal architecture, the effects that have greatest impact are obtained by visually opposing textures and colours. By adding unexpected touches of brilliant or natural colours, the atmosphere is filled with new centers of attention, which personalize the aesthetic purity of the space. This is part of the evolution from the severest form of minimalism, correcting the error that is often made of identifying minimalism exclusively with the colour white, a similar mistake to considering emptiness to be a lack of content.

White walls, floor and furniture creates, too neutral interiors.



Fig: 70 Warm colours in minimal living

Source: Minimalist rooms (2004)

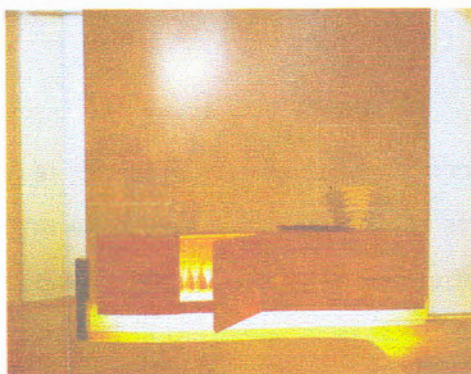


Fig: 71 Colour, texture and light creating aesthetic beauty

Source: Minimalist rooms (2004)

Distribution of black and white colours has achieved an impressive composition that transmits some excitement when viewed in order to avoid the monotony or boredom.



Fig: 72 Stairs in an apartment, situated in A Couruna, Spain

Source: Minimalist rooms (2004)

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The different perspectives that we experience we move around these environments allow us to appreciate the deli- harmony of the whole, in which the colors contribute different sensation according to their lighting and their relationship with the other elements of the room. This way the emptiness is filled with content, establishing a balanced co-existence between simplification and the eloquence of colour, which enriches the sensory experience in these interiors.

The effects that colors generate are essential to the achievement of a harmonious atmosphere. From the point of view of visual experience, harmony is understood as that which is pleasing to the eye. Consequently, in an ambience where chromatic harmony reigns, an infinite sense of order and balance is created in the visual perception. When harmony is broken, the resulting whole transmits either chaos or boredom, depending on whether the stimulation is too high or too weak.

2.3.3 Use of Materials & Textures

"The essence of minimalism is simplicity, but simplicity, without depth is merely cheap and one has to think deeply about the materials and the space, to achieve depth in the minimalist pace." - Tadao Ando

(Tadao Ando, <http://architect.architecture.sk/tadao-ando-architect.php>)

Simplicity in architecture can sometimes only be achieved by the most complex of means. The use of monolithic materials is an important concept. Monolithic materials such as solid marbles or timber cut in to planks to the width of a tree have an intellectual simplicity. But to put them work practically involves an enormous and complex amount of organization. The apparent simplicity of such materials is simplicity only in purely visual sense.



At the John Pawson's house at Notting Hill, the kitchen counter top consists of a single piece of white Carrara marble. Its natural qualities enhance the simplicity of the space. As it is more a reflection of an attitude about space, surface and sense of volume, seamless and stretching effortlessly the full length of the room.

Fig: 73 Large pieces of marble in a kitchen counter top- John pawson's house

Source: London Minimum (1996)



Fig: 74 Stools, table and floorboards constructed in same timber- Douglas
Source: London Minimum (1996)

Also floor board in the house has the same quality.

Use of natural materials in the minimalist space is another concept. Generally select natural materials, because of these sense of depth, and because they are living materials.

Most of the minimalist architects prefer to use mat finishes and rough textures of materials because of the reflection of smooth surfaces. Also rough textures blend the interior with exterior.



Fig: 75 Sri Lankan house done with use of natural materials

Source: <http://www.niksula.hut.fi/~aikaneas/srilanka/>

Using natural material is not a new approach as even in the past Sinhalese vernacular domestic buildings, used materials to cater for essentialities, created architecture with a unique character, which can be seen in modern minimalist spaces. These houses have high textural qualities. The wattle and daub and the cow dung floors have rough textures, which gave mat quality for the overall house, as well as the cooling effect, and used for the sake of cleanliness and to keep off insects and answer the purpose exceedingly well.

2.3.4 Use of light in minimalist space

Light is the simplest phenomena which symbolizes basic human emotions. Light is life and joy, and the darkness is death and sorrow. Between these two extremes, an infinite number of variations occur, such as tranquility excitement etc. Therefore it is inseparable from architecture as well as minimalist space. The fluidity of light through space, with its infinite play of light and shade, facilitate enormous impact to archive minimalism.

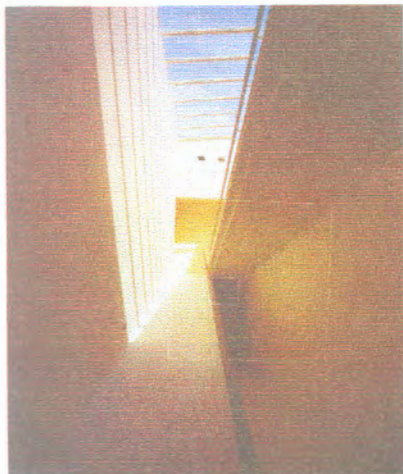


Fig: 76 Ramp connecting two blocks
of a house- Hashin, Japan

Source: **Minimalist rooms (2004)**

Light, whether natural or artificial make different moods by the way it is handled in the space. Also the use of innovative lighting design, avoid the monotony or boredom in the minimalist space.

A minimal house, located in Nagasaki- shi, Japan, a fine glazed band has been inserted which permits beams of light to enter the house during the day while at night, artificial light is projected to the outside. The essence of this housing project was to achieve a volume by means of light.

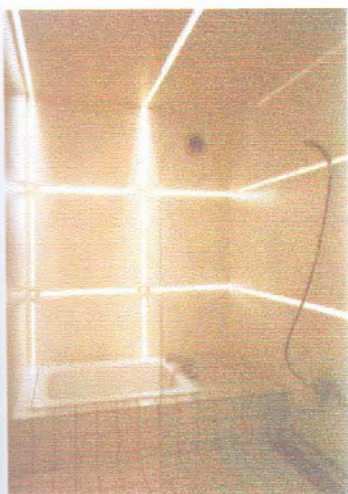


Fig: 77 Bath room with, the checkered
pattern of light- house-Nagasaki, Japan

Source: **Minimalist rooms (2004)**



Fig: 78 Using light with colour and texture to create a
warm and relaxing atmosphere- an apartment in Turin

Source: **Minimalist rooms (2004)**

2.3.5 Element Details in minimalist space

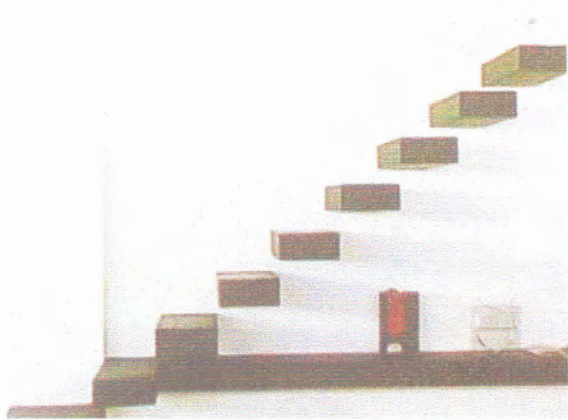


Fig: 79 Staircase, with its cantilevered steps that appear to float in space- Apartment in Coruna, Spain
Source: Minimalist rooms (2004)

Minimal spaces where visual, spatial and tactical sensations are central, every small detail has an essential importance. As other aspects, element details also important to achieve a harmonious atmosphere. From the point of view of visual experience, harmony is understood as that which pleasing to the eye.

Functionalism and simplicity should be the starting point when choosing element detail methods and furniture. Also it is important to consider the way they are interrelated with other aspects, such as columns, textures lighting levels and materials.

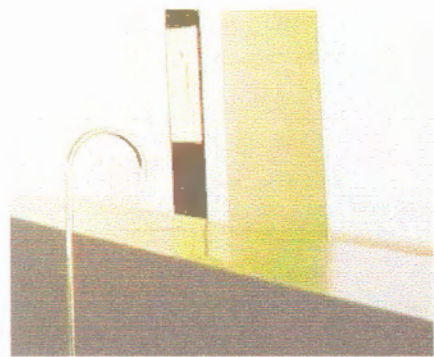


Fig: 80 Kitchen fittings stand out for their complexity.
Source: Minimalist rooms (2004)

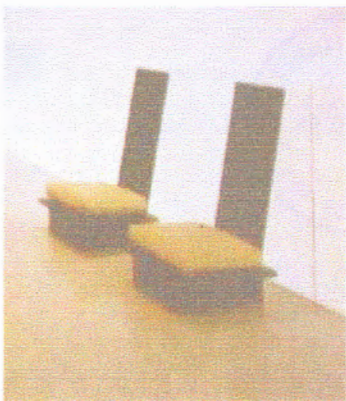


Fig: 81 Selecting simply designed furniture, imbue the space
Source: Minimalist rooms (2004)

3.1 Eastern approaches in Minimalist architecture with special reference to residential

3.1.1 Tadao Ando

3.1.1.1 Back ground

Tadao Ando was one of the first to enter the field of architectural minimalism where he occupies a highly individual and complex position. To put it the other way around one could also say that he is one of the most influential models for the representative of essential Minimalism.

Ando's most remarkable works are certainly the religious buildings. Tado Ando says, *"I feel that the goal of most religious is similar, to make man happier and more at ease with themselves. I see no contradiction in my designing christian churches."*

(Dal Co, F. Tadao Ando, Complete works)

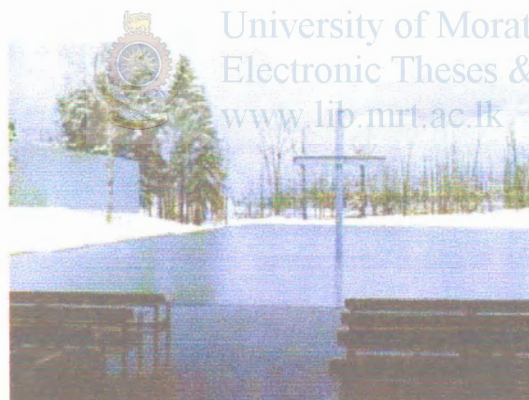


Fig: 82 Church on the Water, Hokkaido (1981) Water has been diverted from a nearby river, and a man-made pond 90x45 meters has been created.

Source: **Minimal architecture** (2003)

Tado Ando has built a number of Christian chapels and other places of religion and contemplation. One of the most amazing church is also one of his simplest; The Church of the light (Baraki, Osaka, 1988- 89) is located in a residential suburb 40km to the north – east of the center of Osaka. The other religious building are: Church on the water, Water Temple in Hyiogo, Meditation space UNESCO in Paris, etc.

"Ando follows the classical Japanese Tradition of opening the house on to the landscape, and he does this whenever the context offers a landscape of a particular quality, for example in his church on the Water in Hokkaido, Japan (1988) if the site cannot offer this quality then Ando closes his building off from its surrounding and compensates for the lack of a relationship to the outside by creating an "implanted" outdoor space."

(Ursprung P., Sachs, A., & Ruby, A., Minimal Architecture, 2003, p6)

The first impression of his architecture is its materiality. His large and powerfull walls set a limit. A second impression of his is the tactility. His hard walls seem soft to touch, admit lights, wind stillness. Third impression is the emptiness because only light space surround the visitor in Tadao Ando's building. Other things that had influenced his work and vocabulary of architecture is the pantheon in Rome and "enso", which is mystrious circle drawn by zen –buddhists and symbolizing emptiness, loneliness, oneness and the moment of enlightenment. The circle and other rigorous geometrical forms are the basic forms of Tadao Ando's art presentation.



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Many of his buildings, above all the earlier ones, are characterised by simplicity and introversion and by the use of fair – faced concrete both externally and internally which, in terms of craftsmanship, is so well made that it has a smooth almost silky texture. Ando's buildings are places of spatial intensity and calm in often – heterogeneous surroundings.

"As William J.R. Curtis remarks: "Simplification sometimes results in the simplistic, but with Ando it leads to concentration.""

(Ursprung, P., Sachs, A., & Ruby, A., Minimal architecture, 2003, p8)

"I think architecture becomes interesting when it has a double character, that is, when it is as simple as possible but, at the same time as complex as possible." –Tadao Ando

3.1.1.2 Project - Azuma House in Sumiyoshi

(a) Introduction

"This small house was the point of departure for my subsequent work. It is a memorable building for me, one of which I am very fond." -Tadao Ando

(Bertoni, F., Minimalist Architecture, 2002)

This is particularly true of his Azuma House in Sumiyoshi dating from 1975 – 76 which Ando describes as the starting point for his subsequent works. The internal organization of the house is based on a centripetal principle.

(b) Architectural appreciation

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This closed concrete box in central Osaka, inserted in a timber – built terraced housing development dating from the pre – war era, is in every sense the antithesis of its restless neighborhood. The front is a smooth concrete wall interrupted only by the entrance; it both attracts the gaze and repels it, creating a strong visual appeal.



Fig: 83 Exterior view of Azuma House in Sumiyoshi, Japan.
Source: Minimal architecture (2003)

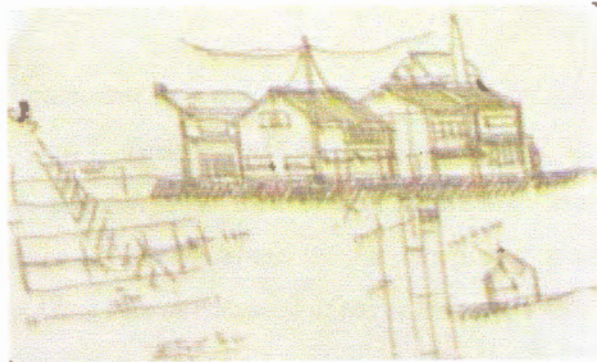
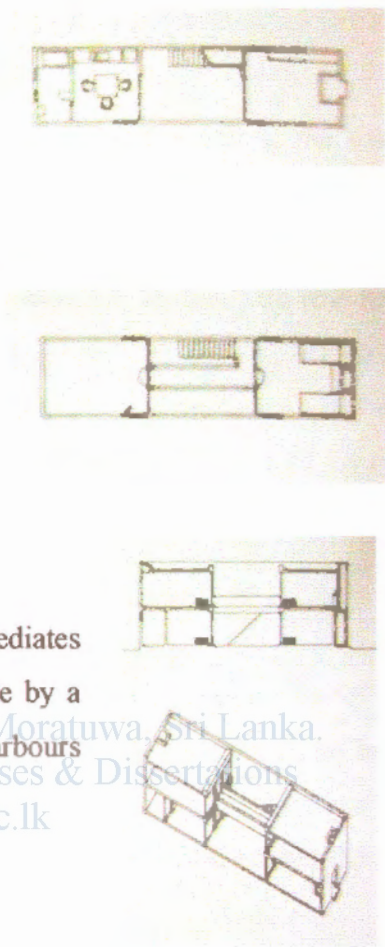


Fig: 84 Sketches of Azuma House in Sumiyoshi, Japan.
Source: Minimal architecture (2003)

A court yard forms the spatial and imagined center point of the tripartite floor plan. All of the rooms in the house are arranged around it in a way that guarantees the maximum amount of privacy. So the whole object space is divided in to a three equal rectangular spaces, while the central part is atrium. The space nearest the doorway contains the living room at ground level, and the bed room above. The last final space contains the kitchen and bathroom below, and the master bedroom above.



Light flooding the entrance area from above mediates between the interior and the street – a gesture made by a house whose “architecture of the wall” undeniably harbours a certain socio – cultural potential.

Fig: 85 Azuma House in Sumiyoshi, Japan 1975-76, house plans and section.
Source: Minimal architecture (2003)



Fig: 86 Interior view of Azuma House in Sumiyoshi, Japan.
Source: Minimal architecture (2003)

“I am interested in a dialogue with the architecture of the past”, Tadao Ando says, “but it must be filtered through my own vision and my own experience. I am indebted to Le Corbusier and Ludwig Mies Van der Rohe, but the same way, I take what they did and interpret it in my own fashion”.

(Tadao Ando, [http:// architect.architecture.sk/tadao-ando-architect.php](http://architect.architecture.sk/tadao-ando-architect.php))

3.1.1.3 Project - Koshino House, Ashiya (1984)

(a) Introduction

"Architecture not only mirrors the times; it must also offer criticism of the times. It represents an autonomous system of thought. To think architecturally is not merely to deal with external conditions or to solve functional problems. I am convinced that architects must train themselves to ask fundamental questions, to give free rein to their individual architectural imaginations, and to consider people, life, history, tradition and climate. We must create architectural spaces in which man can experience - as he does with poetry or music - surprise, discovery, intellectual stimulation, peace and joy of life"

Tadao Ando

(b) Architectural appreciation

The Koshino House, second realization of Tadao Ando, was completed in two phases. This house is a masterpiece, and collects all fragments of Tadao Ando's architectural vocabulary, mainly the light.



Fig: 87 Sketch of Koshino House, Ashiya (1984)
Source: <http://www.arcspace.com/index.shtml>



"Light is the origin of all being. Striking the surface of things, light grants them an outline; gathering shadows behind things, it gives them depth. Things are articulated around borders of light and darkness, and obtain their individual form, discovering interrelationships, and become infinitely linked."-
Tadao Ando

(Dal Co, F. Tadao Ando, Complete works, 1995)

Fig: 88 Koshino House, Ashiya (1984)
Source: <http://www.arcspace.com/index.shtml>

3.1.2 Shigeru Ban

3.1.2.1 Back ground

Ban is excluded from the long – running cultivated dispute between Ando, Pawson, etc. as to whose walls are the smoothest for the simple reason that his houses often have no walls at all. In the eyes of those conditioned by wall paper, the work of Shigery Ban must look like the ultimate incamation of minimalist architecture, after all reduction appears to penetrate to the very bones of architecture.

Instead of working on a reductionist project Shigeru Ban conducts a permanent mutation of architecture's constituent elements such as walls, doors, windows and fittings. The further development of the Japanese architectural tradition plays an important role in this process. For example Ban replaces wood with less expensive cardboard tubes (which have a similar load – bearing capacity to wood and can be made water – and fire resistant through the use of special techniques. After having worked with paper tubes as display structures for exhibitions, Ban discovered that paper tubes are strong enough to serve as construction material of architecture in its own right. Entirely prefabricated and assembled on site, the paper tube structure allows for an “instant architecture” able to appear and disappear.

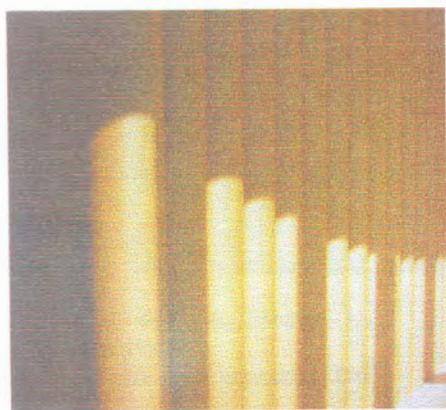


Fig: 89 Paper tubes as display structures,
Miyake Design Studio Gallery,
Shiwuya – Ku, Tokyo, Japan, 1994
Source: **Minimal architecture (2003)**



Fig: 90 Interior View of Miyake Design Studio
Gallery, Shiwuya – Ku, Tokyo, Japan, 1994
Source: **Minimal architecture (2003)**



3.1.2.2 Project – Curtain wall house in Itabashi – Ku, Tokyo

(a) Introduction

Taking the Modernist metaphor of the curtain wall quite literally, in his curtain wall House in Itabashi – Ku, Tokyo(1995) he makes the façade from a piece of material.

(b) Architectural appreciation

By drawing the curtain the inhabitant can determine whether the act of living is to be conducted inside the boundaries of his townhouse or to become part of public street life in the neighborhood. Sliding glass doors running behind the curtain provide the climatic protection necessary in winter. Also within the tight urban setting, it has make different meanwhile giving physically and psychologically appropriate living condition to the user.



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Fig: 91 Curtain wall house, Itabashi – Ku, Tokyo, Japan, 1995
Source: Minimal architecture (2003)



Fig: 92 View after drawing the curtain- Curtain wall house, Itabashi – Ku, Tokyo, Japan 1995
Source: Minimal architecture (2003)

3.1.2.3 Project – Wall less house in Karuizawa, Kitasaku – Gun, Nagano (1997)

(a) Introduction

The wall – less house in Karuizawa, Kitasaku – Gun, Nagano consists of a floor and a roof slab only.

(b) Architectural appreciation

The house is completely open at the sides so that interior space flows without interruption into the natural surroundings of the site. Transparent sliding doors concealed in the wall against the slope – the only wall in fact – here again provide minimum protection against the elements. Instead of fixed internal walls the house has a system of sliding wooden partitions that can, when required, be used to divide the open space into living room, bedroom and bathroom and when not needed can be slid away to one side.



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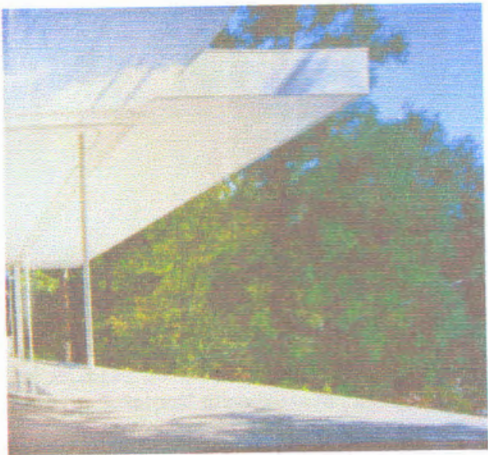


Fig: 93 Wall less house- Shigeru ban
Source: Minimal architecture (2003)

Fig: 94 Wall less house- interior space flows
into the natural surroundings.
Source: Minimal architecture (2003)

3.1.2.4 Project – Naked House in Kawagoe – Shi (2000)

(a) Introduction

Naked House in Kawagoe – shi (2000) is another project where five members of a family bridging several different generations live in space – boxes mounted on castors.

(b) Architectural appreciation

These boxes can be freely positioned in the long hall of the house, which is lit through translucent facades, and can either stand separately or be connected to form long “tubes”.

In traditional Japanese domestic architecture, to which Ban refers, there are no private spaces. A single space served as dining, working, living and sleeping area. Equally foreign to this culture is the idea of closed external walls in the sense of brick or masonry facades. Instead the open timber structure is screened from the outside by wooden frames spanned with rice paper. The ‘emptiness’ in Shigeru Ban’s architecture is therefore not the outcome of a striving for reduction but reveals an understanding of material whose cultural codes do not match the values of the Western tradition, often assumed to be universal.

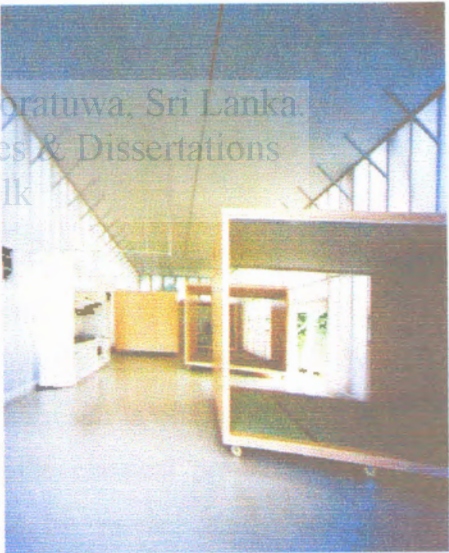


Fig: 95 Interior view of Naked House,
Tokyo, Japan, 2000
Source: Minimal architecture (2003)

3.2 Western approach in Minimalist architecture with special reference to residential

3.2.1 John Pawson

3.2.1.1 Back ground

Pawson can be said to be an architect of the extreme. He will do what ever it takes to follow his singular vision. His own house in London's Notting Hill is the best example.

"Architecture is John Pawson's life, not his career, and he does it mainly to please himself. He does not seem concerned if his approach is understood or accepted and he enjoys the luxury of always having clients. All he is concerned with is, as he says, 'cutting out the crap' "

For him, it's all rather simple and straightforward: ' Architecture is about space: space qualified by light, geometry and repetition.....with the key element being restraint. ' And restraint is something he takes very seriously indeed."



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Electronic Thesis (Ypma, H., London Minimum, 1996, p131)
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Pawson's approach is not limited to smallish urban spaces. Mount Eagle, the home of clients in Ireland idyllically situated overlooking the sea, has benefited equally from his creative imprint. Mount Eagle is a Georgian house of undisputed distinction into which Pawson has introduced his own signature elements. The result is one of pure harmony. The strong simplicity of his work is reinforced by the classical proportions of the Georgian architecture and large open areas defined by subtle, gently contrasting materials. White plaster walls, French limestone floors and Japanese oak staircases conspire to create an elegantly minimal environment.

"the minimalism being practiced in London today has its roots in a 'reductivist tradition'. Mount Eagle brings this tradition full circle; past and present unite in a single statement of reduction and refinement."

(Ypma, H., London Minimum, 1996, p140)

3.2.1.2 Project – John Pawson's house in London's Notting Hill

(a) Introduction

John Pawson's designs explore fundamentals - space, light and materials - and avoid stylistic mannerisms. Pawson's architecture is all about lifting the sense of oppression that comes from 'clutter' by reducing a space and its contents to the barest minimum. He has used his house as an arena, a place to work with new ideas and notions, a place to push the envelope of reduction even further.

"As Cindy Palmano, a noted photographer and enthusiast for Pawson's work, points out: 'Its like asking how you walk in platform shoes – comfort and easiness are not the main concern.....what matters with Pawson's work is the mood his spaces put one in – tranquil, contemplative, elegant.'....."

(Ypma, H., London Minimum, 1996, p131)



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Empty houses, it seems, make most people quite

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anxious. They associate physical softness with emotional comfort. Pawson will have none of it. He is convinced that the epitome of modern luxury is space and light – providing a calm that contrasts with the chaos of the city.



Fig: 96 John Pawson, Pawson House, London -Interior view of the House

Source: **London Minimum** (1996)

"What gets people talking about Pawson's work is the lack of stuff. The buildings are stripped of distractions - to fill them with clutter would defeat the object. And Pawson has minimal living down to a fine art. That doesn't mean that he doesn't have any possessions. It's just that he builds storage that is apparently invisible."

(Design innovator: John Pawson- architect, <http://www.observer.co.uk>)

(b) Architectural appreciation

"What John Pawson says on his house design: 'I designed it to let the light in and get the views out and still retain some privacy,' he says. It's not so much empty as calm. The basement kitchen has a wall of glass leading to a mirror image in the back garden. The stairs are tall and narrow, giving an illusion of height, and the shower room has a glass ceiling. 'You can see and hear the weather,' he says.

(Design innovator: John Pawson, architect, <http://www.observer.co.uk>)

Within the original Victorian shell the stacked interior of a standard London house has been transformed by different geometries. On the lower floors, rooms run from front to back and flow into terraces, the linearity of the spaces reinforced by a long stone bench or kitchen counter stretching the length of the house and beyond into the garden courtyard. Walls are painted in white.



Fig: 97 Pawson House, London – Kitchen counter stretching the length of the house
Source: <http://www.eyestorm.com/>

The stair case has been set in a narrow vertical space between two walls; the steps do not touch the walls, creating the impression of a floating staircase.



Fig: 98 Stair case set in a narrow vertical space
- Pawson House, London
Source: **London Minimum (1996)**

Smallest detail is important in simplifying a design as a whole. It is clear when concern detailing in John Pawson's house. Also reduction to essential is not successful, if the design hasn't aesthetic beauty it's own. So enhancing spatial qualities, considerations on; materials, textures, colours, and lighting is essential.

- **Materials**

"Only three materials have been allowed into the John Pawson's house, namely: stone, timber and white – painted plaster".

(Ypma, H., London Minimum, 1996, p138)



Fig: 99 Stool, table, floor in same timber; simply and elegant

Source: **London Minimum** (1996)

For the floor, boards of Douglas fir were laid the entire length of the house in unbroken planks. The stools, bed and the dinning table have been constructed on site from the same timber as the floorboards. The massive planks reinforce the majesty of simplicity.

The kitchen counter top is consisted a single piece of white Carrara marble. Heaviness of material not has been the problem to create simplicity meanwhile catering for essentials. It is clear when concern the materials of floor and kitchen counter top.

Though the space is small, through the minimal approach, it can make feel great to the user. As minimal is not about living in empty, but with essentials which arranged in simply and elegant way of thinking.



Fig: 100 Kitchen is a visual extension of the main space
Source: **London Minimum** (1996)

- **Details**

Using pure geometric forms, in design have enhanced the simplicity. Also the need of simply details in creating minimal architecture is shown.



The beauty of minimal architecture relies on how the designer has catered for essentials meanwhile resulting elegant and tranquil space.

Fig: 101 Kitchen counter top consists of a single piece of marble
Source: London Minimum (1996)

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Fig: 102 Simple designs for furniture.
Source: London Minimum (1996)



Fig: 103 Using pure geometric forms in detailing
Source: London Minimum (1996)

3.3 The Sri Lankan architect’s approaches in Minimalist architecture with special reference to contemporary residential in urban context

3.3.1 Project – Housing block at Kalubowila
Archit. Arosh Gamage

3.3.1.1 Introduction

The building consists of four units of housing and an office at ground floor. This is built in 9 perches plot within a tight urban setting.

Elementary geometry of the house can be recognized clearly in the sense of 3D forms.



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Fig: 104 Exterior view of the house



Fig: 105 Entrance to the building – Following pure geometrical forms

3.3.1.2 Architectural appreciation

(a) Two dimensional form

The use of separating partition was minimized to make individual house block looks bigger and spacious. So that one space flows to the other freely. Within an individual housing unit living, dining and kitchen has been located in one integrated space. One unit consist two bed rooms and one bath room. Further the architecture of this building has concentrated much on lighting, cooling, ventilation etc. Light weight stair case has been placed not to disturb wind direction meanwhile adding simplicity.



Simply design of stair case is enhanced with the colour of wall adding aesthetic.

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Fig: 106 Staircase in simple manner adding aesthetic.

Warm and cool colours have been used, creating aesthetic design regarding the tight urban context.



Fig: 107 Entrance to two housing units

Within a tight urban context, making physical and psychological comfortable place is the designer's target. Also using minimal concept is not totally about catering for function only. Making aesthetic design with essentials is a complex effort. Here from the main entrance to individual unit, designer has make simple and active environment with colour and details.

Vistas and spaciousness make user psychologically comfort within a tight space. From the entrance to individual housing unit visitor is captured by view of window. Also multifunctional space with out partitions adds spaciousness.



Fig: 109 Vistas from the entrance of individual unit



Fig: 108 About to enter the house unit- first view of interior

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Fig: 110 View of multifunctional space - living

The wall, rough texture with horizontal line on it direct user towards the simple frame view of the window. White colour of the wall expands the space. Meanwhile Yellow coloured wall has the quality of enhancing the vistas.



Fig: 111 Closer view of multifunctional space - living

No paintings hanging on the wall, Simple lighting decorations. Colour of furniture and cushions well match with the white painted wall. Simply detailing of window, doesn't create disturbance to the exterior view. Balanced composition is an important aspect to achieve minimalist space. The furniture arrangement near window has catered that aspect.

Natural light and ventilation has been taken via windows which are design in simply way that don't include frame or glasses. Within the interior it has both physical and psychological comfort when consider accordance to tight urban context. Though space is limited for individual unit the way colour, natural light and details are used make appropriate for living.



Fig: 112 View of the Pantry



Fig: 113 View of living from the pantry

White colour used throughout the house emphasizes on the fluidity of light and space, while enhancing the purity of form. Use of few numbers of colours is another important concept in achieving minimalism.



Fig: 114 View of the entrance from the living



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(b) Materials

Use of monolithic materials and use of large pieces can be considered as an important concept to achieve sense of wholeness or to experience seamless quality of materials in minimalism. The idea behind that is not to break visual concentration of the perceiver.

The repetition adds simplicity to the design. The horizontal lines of left side wall from the entrance add simplicity meanwhile enhancing wholeness with the aid of texture of floor finish. Also Grey coloured floor finish, instead of using multi colour different shape tiles, which destruct the perceiver's eye, give a simply pleasing look.



Fig: 115 Cement finish adding wholeness

Natural finish of timber has been added to design in pantry cupboards. Same colour grey, is used for side walls of pantry as in floor contains.



Fig: 116 Natural grains to the design in pantry cupboard

(c) Element Details



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Element details are another aspect which enhances the spatial quality of the minimalist space.



Fig: 117 Simple detailing of stair case

Staircase has been designed with timber and steel, limiting to simple details.





Fig: 118 Simple detailing of door with few colours



Fig: 119 Pure geometric forms in detailing



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Fig: 120 Simple detailing of window and racks

Living with essentials is basic concept of minimal architecture. But it is not about empty house. Reduction to basic function is not appropriate for living. More than that whole design has to be simply as well as aesthetic one. So attempt for minimal design is not an easy task. Here architect has succeeded in creating simply and elegant design in tight urban context. Though compared with earlier discussed international projects with this, decorative furniture has been used in appropriate way with out breaking simplicity as a whole. Also using “Minimalism” in an architect’s application is subjective matter as it can be “More” or “less”.

3.3.2 Project – Chandaka Jayasundere House- Colombo.

Archit. Varuna de Silva

3.3.2.1 Introduction

The slim house has been built in the outskirts of Colombo in a tight urban setting, sandwiched between two houses in an extent of nine perch. The urban three – storied dwelling unit has comprehensively designed by the Architect to a lawyer by profession. This house is an introverted, like most urban houses in Colombo due to the small plot sizes and also due to the fact that this site faces a somewhat busy road with residential sprawl. There is a mandatory rear space to be left open to the sky. This space has been utilized to become the garden.

Elementary geometry of the house can be recognized clearly in the sense of 2D and 3D forms.



Fig: 121 Façade to the road

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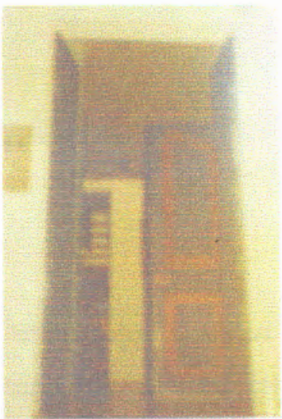


Fig: 122 Simple detailed entrance door

3.3.2.2 Architectural appreciation

(a) Two dimensional form

Two dimensional form is extremely minimal in this design. The use of separating partition walls was minimized to make the house look bigger and spacious. So that one space flows to the other freely. Staircases were also designed as light as possible so that the flowing quality of the spaces is not disturbed. It creates the sense of wholeness by avoiding unusable corridors, odd shape edges and corners.

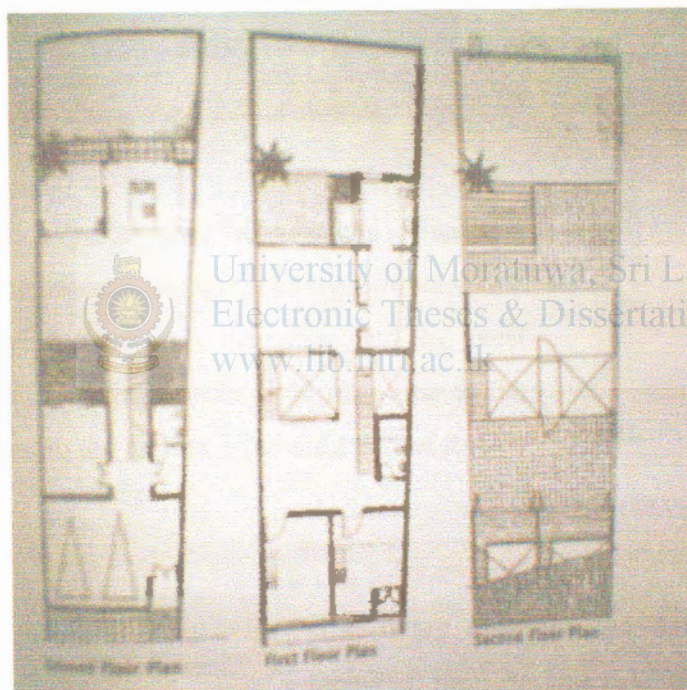


Fig: 123 Plans of the house

As the building is on the edge of a road, the carport is hence accommodated inside the house. The office is close to the carport. Much needed natural light and ventilation, to the house is obtained through the central triple – height void open to the sky space, which are a shallow reflecting pool and a small courtyard.

Huge open free volume creates sense of wholeness which does not break the visual concentration of perceiver. This is an important quality in minimal architecture.

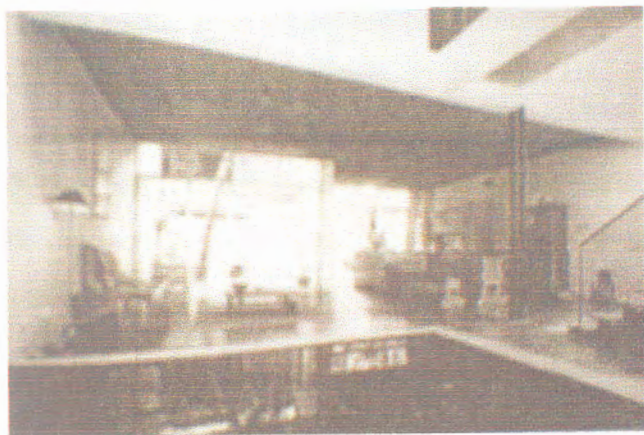


Fig: 124 Huge open free volume creates sense of wholeness

The pool acts as a buffer zone between the office and living areas of the house while maintaining a direct visual link. On the ground floor, only the office and the guest toilet have walls. All other spaces flow from one to the other and open out to the garden, becoming part of it.



Fig: 125 View of the living.



Fig: 126 View of Dining and cooking

The living area has the dining, cooking area facing it, pool on one side and a double height verandah and the garden beyond. The cooking space is also part of this whole open area as the clients love cooking and entertaining close friends often.

The upper floor consists of three bedrooms and two bathrooms. The master bedroom looks down on the garden while the other two bedrooms are in front facing the road. These have small decks from which one could get on to the roof terrace. The family area is in the center, from where one can communicate with the whole house, as this space is adjoining the void in the middle, which is the core of the house.

All these explanations are to emphasize the spatial interpenetration and sense of wholeness which one expects from a minimal house, has achieved by the architect throughout the house.

The client's necessity was to design a comfortable, easily maintainable home with a lot of natural light and ventilation. As the plot was narrow and long, to obtain light and ventilation to the center of the house, part of the center was opened to the sky. This is the method used in traditional Sri Lankan courtyard houses. In addition to natural light and ventilation, this keeps the house cool throughout the day. Also natural lighting has been used to enhance the spatial quality as well as functional purposes. Much needed natural light and ventilation, to the house is obtained through the central triple – height void open to the sky space, which is a shallow reflecting pool and a small courtyard. Comparatively large sparkling pool provides cooling effect while enhancing the spatial quality.



Fig: 127 Living and adjacent rear garden

Also the way colour has been used also enhances the spatial quality. One internal wall is painted orange through all three floors along the length of the house, but rest of the walls is painted with pure white. Grey colour has been used for the floor and soffit. Correcting the error that is often made of identifying minimalism exclusively with the colour of White, combination of orange colour (only in a single wall) with white, have achieved a dynamic composition, that transmit some excitement when viewed in order to avoid monotony or boredom.

(b) Materials

Cut and polished ordinary cement floors, fair faced concrete soffits with shuttering marks exposed enhance the simplicity of monolithic materials. The idea is to enjoy the seamlessness of the material in minimalism. Seamlessness brings a sense of wholeness to the perceiver.

(c) Element Details

Minimal spaces where visual spatial and tactile sensations are central, every small detail has an essential importance. The open rise steel and timber staircases and hand rails have enormous simplicity as elements of the house.

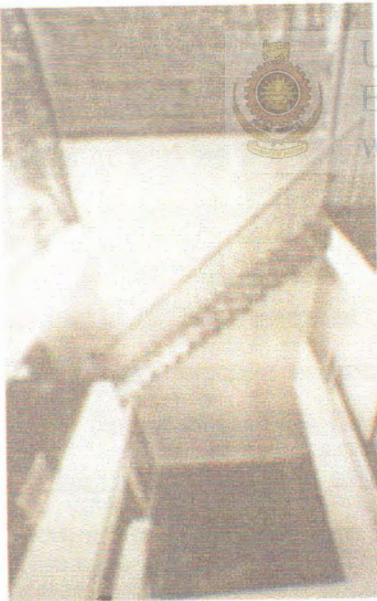


Fig: 128 Open rise steel and timber staircase



Fig: 129 Simple detailing in stair case

CONCLUSION

Minimalism as a concept in general, may vary with each individual's ability to apprehend what minimalism is. Though the term Minimalism was popularized in the 1960's as a design approach, some important concepts of minimalism have existed for a long period prior to that which is in Buddha's time.

Minimalism as a design approach, it caters for essentialities, while providing tranquil, contemplative, soothing and sensual spaces. There is nothing that could be added or removed since every thing fulfills a determined function.

This study reveals the appropriateness of minimalist architecture in contemporary urban residential. As today, contemporary urban environment has become a very congested and a busy in which people work like machines, mentally stressed and physically exhausted. At present, most of people view house as a place to which they retreat, a sanctuary from the stress of working life. The house has been considered the spiritual core of a person thus it should be a place of tranquility.

According to the observation in this study; it reveals that among architects the concept of minimalism is subjective as it can be "less minimalist" or "more minimalist". Also using colour in design varies with the individual architect's aspects and their way of practice. The general idea about use of colour in minimal architecture is, use of pure white or monochromatism. This concept is also influenced by Japanese Zen architecture. But according to the analysis, it appears that it is not essential to be restricted to a single colour. Specially full white interiors could some times oppress the perceiver. With the correct combination of one of two colours with white, achieves a dynamic composition that transmits some excitement when viewed in order to avoid the monotony or boredom caused by a too neutral interior.

Further, simple designs make less impact on nature with compared to complex design. So applying minimalist approach in present urban context is beneficial for both human and his surrounding. But living with essentials, some architects identify as simple design with use of superfluous material and try to depict it as “minimalist”. So that wrong has been corrected with the introducing of term “Eco – minimalism” which sound of environmental sustainable designs via “minimalist approach”. So the term eco-minimalism will make researches awaken to find its’ sense in design both appropriate for human being and natural environment.

Some one may argue this as going backward. But there is limit people can control the nature, more than that nature control human beings.



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"Ando follows the classical Japanese Tradition of opening the house on to the landscape, and he does this whenever the context offers a landscape of a particular quality, for example in his church on the Water in Hokkaido, Japan (1988) if the site cannot offer this quality then Ando closes his building off from its surrounding and compensates for the lack of a relationship to the outside by creating an "implanted" outdoor space."

(Ursprung P., Sachs, A., & Ruby, A., Minimal Architecture, 2003, p6)

The first impression of his architecture is its materiality. His large and powerfull walls set a limit. A second impression of his is the tactility. His hard walls seem soft to touch, admit lights, wind stillness. Third impression is the emptiness because only light space surround the visitor in Tadao Ando's building. Other things that had influenced his work and vocabulary of architecture is the pantheon in Rome and "enso", which is mystrious circle drawn by zen –buddhists and symbolizing emptiness, loneliness, oneness and the moment of enlightenment. The circle and other rigorous geometrical forms are the basic forms of Tadao Ando's art presentation.



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Many of his buildings, above all the earlier ones, are characterised by simplicity and introversion and by the use of fair – faced concrete both externally and internally which, in terms of craftsmanship, is so well made that it has a smooth almost silky texture. Ando's buildings are places of spatial intensity and calm in often – heterogeneous surroundings.

"As William J.R. Curtis remarks: "Simplification sometimes results in the simplistic, but with Ando it leads to concentration.""

(Ursprung, P., Sachs, A., & Ruby, A., Minimal architecture, 2003, p8)

"I think architecture becomes interesting when it has a double character, that is, when it is as simple as possible but, at the same time as complex as possible." –Tadao Ando

3.1.1.2 Project - Azuma House in Sumiyoshi

(a) Introduction

"This small house was the point of departure for my subsequent work. It is a memorable building for me, one of which I am very fond." -Tadao Ando

(Bertoni, F., Minimalist Architecture, 2002)

This is particularly true of his Azuma House in Sumiyoshi dating from 1975 – 76 which Ando describes as the starting point for his subsequent works. The internal organization of the house is based on a centripetal principle.

(b) Architectural appreciation



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This closed concrete box in central Osaka, inserted in a timber – built terraced housing development dating from the pre – war era, is in every sense the antithesis of its restless neighborhood. The front is a smooth concrete wall interrupted only by the entrance; it both attracts the gaze and repels it, creating a strong visual appeal.



Fig: 83 Exterior view of Azuma House in Sumiyoshi, Japan.
Source: Minimal architecture (2003)

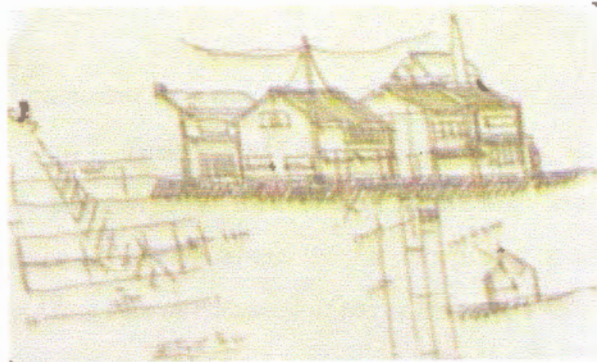
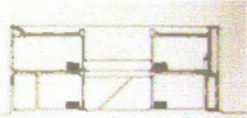
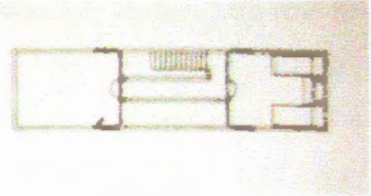
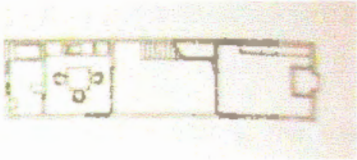


Fig: 84 Sketches of Azuma House in Sumiyoshi, Japan.
Source: Minimal architecture (2003)

A court yard forms the spatial and imagined center point of the tripartite floor plan. All of the rooms in the house are arranged around it in a way that guarantees the maximum amount of privacy. So the whole object space is divided in to a three equal rectangular spaces, while the central part is atrium. The space nearest the doorway contains the living room at ground level, and the bed room above. The last final space contains the kitchen and bathroom below, and the master bedroom above.



Light flooding the entrance area from above mediates between the interior and the street – a gesture made by a house whose “architecture of the wall” undeniably harbours a certain socio – cultural potential.

Fig: 85 Azuma House in Sumiyoshi, Japan 1975-76, house plans and section.
Source: Minimal architecture (2003)



Fig: 86 Interior view of Azuma House in Sumiyoshi, Japan.
Source: Minimal architecture (2003)

“I am interested in a dialogue with the architecture of the past”, Tadao Ando says, “but it must be filtered through my own vision and my own experience. I am indebted to Le Corbusier and Ludwig Mies Van der Rohe, but the same way, I take what they did and interpret it in my own fashion”.

(Tadao Ando, [http:// architect.architecture.sk/tadao-ando-architect.php](http://architect.architecture.sk/tadao-ando-architect.php))

3.1.1.3 Project - Koshino House, Ashiya (1984)

(a) Introduction

"Architecture not only mirrors the times; it must also offer criticism of the times. It represents an autonomous system of thought. To think architecturally is not merely to deal with external conditions or to solve functional problems. I am convinced that architects must train themselves to ask fundamental questions, to give free rein to their individual architectural imaginations, and to consider people, life, history, tradition and climate. We must create architectural spaces in which man can experience - as he does with poetry or music - surprise, discovery, intellectual stimulation, peace and joy of life"

Tadao Ando

(b) Architectural appreciation

The Koshino House, second realization of Tadao Ando, was completed in two phases. This house is a masterpiece, and collects all fragments of Tadao Ando's architectural vocabulary, mainly the light.



Fig: 87 Sketch of Koshino House, Ashiya (1984)
Source: <http://www.arcspace.com/index.shtml>



"Light is the origin of all being. Striking the surface of things, light grants them an outline; gathering shadows behind things, it gives them depth. Things are articulated around borders of light and darkness, and obtain their individual form, discovering interrelationships, and become infinitely linked."-
Tadao Ando

(Dal Co, F. Tadao Ando, Complete works, 1995)

Fig: 88 Koshino House, Ashiya (1984)
Source: <http://www.arcspace.com/index.shtml>

3.1.2 Shigeru Ban

3.1.2.1 Back ground

Ban is excluded from the long – running cultivated dispute between Ando, Pawson, etc. as to whose walls are the smoothest for the simple reason that his houses often have no walls at all. In the eyes of those conditioned by wall paper, the work of Shigery Ban must look like the ultimate incamation of minimalist architecture, after all reduction appears to penetrate to the very bones of architecture.

Instead of working on a reductionist project Shigeru Ban conducts a permanent mutation of architecture's constituent elements such as walls, doors, windows and fittings. The further development of the Japanese architectural tradition plays an important role in this process. For example Ban replaces wood with less expensive cardboard tubes (which have a similar load – bearing capacity to wood and can be made water – and fire resistant through the use of special techniques. After having worked with paper tubes as display structures for exhibitions, Ban discovered that paper tubes are strong enough to serve as construction material of architecture in its own right. Entirely prefabricated and assembled on site, the paper tube structure allows for an “instant architecture” able to appear and disappear.

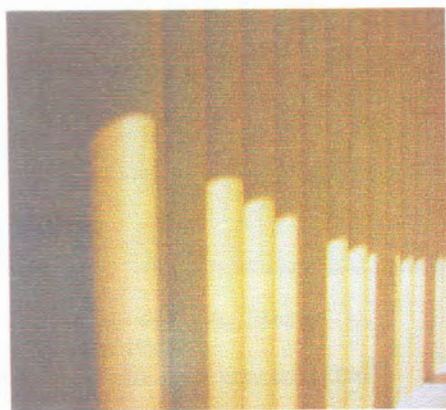


Fig: 89 Paper tubes as display structures,
Miyake Design Studio Gallery,
Shiwuya – Ku, Tokyo, Japan, 1994
Source: **Minimal architecture (2003)**



Fig: 90 Interior View of Miyake Design Studio
Gallery, Shiwuya – Ku, Tokyo, Japan, 1994
Source: **Minimal architecture (2003)**



3.1.2.2 Project – Curtain wall house in Itabashi – Ku, Tokyo

(a) Introduction

Taking the Modernist metaphor of the curtain wall quite literally, in his curtain wall House in Itabashi – Ku, Tokyo(1995) he makes the façade from a piece of material.

(b) Architectural appreciation

By drawing the curtain the inhabitant can determine whether the act of living is to be conducted inside the boundaries of his townhouse or to become part of public street life in the neighborhood. Sliding glass doors running behind the curtain provide the climatic protection necessary in winter. Also within the tight urban setting, it has make different meanwhile giving physically and psychologically appropriate living condition to the user.



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Fig: 91 Curtain wall house, Itabashi – Ku, Tokyo, Japan, 1995
Source: Minimal architecture (2003)



Fig: 92 View after drawing the curtain- Curtain wall house, Itabashi – Ku, Tokyo, Japan 1995
Source: Minimal architecture (2003)

3.1.2.3 Project – Wall less house in Karuizawa, Kitasaku – Gun, Nagano (1997)

(a) Introduction

The wall – less house in Karuizawa, Kitasaku – Gun, Nagano consists of a floor and a roof slab only.

(b) Architectural appreciation

The house is completely open at the sides so that interior space flows without interruption into the natural surroundings of the site. Transparent sliding doors concealed in the wall against the slope – the only wall in fact – here again provide minimum protection against the elements. Instead of fixed internal walls the house has a system of sliding wooden partitions that can, when required, be used to divide the open space into living room, bedroom and bathroom and when not needed can be slid away to one side.



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Fig: 93 Wall less house- Shigeru ban
Source: Minimal architecture (2003)

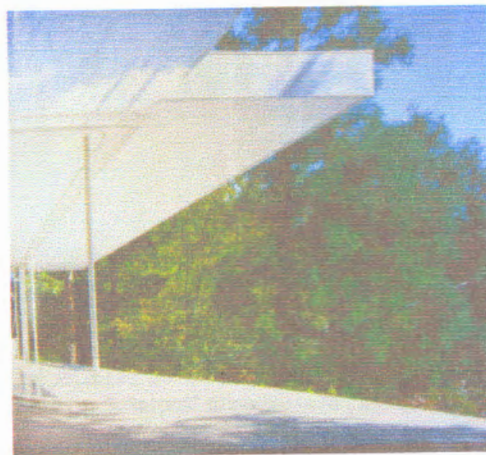


Fig: 94 Wall less house- interior space flows into the natural surroundings.
Source: Minimal architecture (2003)

3.1.2.4 Project – Naked House in Kawagoe – Shi (2000)

(a) Introduction

Naked House in Kawagoe – shi (2000) is another project where five members of a family bridging several different generations live in space – boxes mounted on castors.

(b) Architectural appreciation

These boxes can be freely positioned in the long hall of the house, which is lit through translucent facades, and can either stand separately or be connected to form long “tubes”.

In traditional Japanese domestic architecture, to which Ban refers, there are no private spaces. A single space served as dining, working, living and sleeping area. Equally foreign to this culture is the idea of closed external walls in the sense of brick or masonry facades. Instead the open timber structure is screened from the outside by wooden frames spanned with rice paper. The ‘emptiness’ in Shigeru Ban’s architecture is therefore not the outcome of a striving for reduction but reveals an understanding of material whose cultural codes do not match the values of the Western tradition, often assumed to be universal.

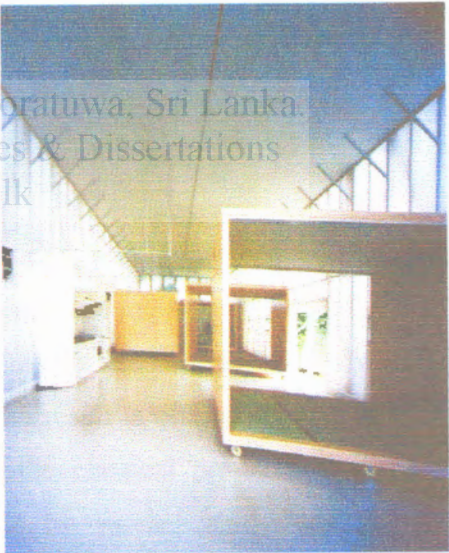


Fig: 95 Interior view of Naked House,
Tokyo, Japan, 2000
Source: Minimal architecture (2003)

3.2 Western approach in Minimalist architecture with special reference to residential

3.2.1 John Pawson

3.2.1.1 Back ground

Pawson can be said to be an architect of the extreme. He will do what ever it takes to follow his singular vision. His own house in London's Notting Hill is the best example.

"Architecture is John Pawson's life, not his career, and he does it mainly to please himself. He does not seem concerned if his approach is understood or accepted and he enjoys the luxury of always having clients. All he is concerned with is, as he says, 'cutting out the crap' "

For him, it's all rather simple and straightforward: ' Architecture is about space: space qualified by light, geometry and repetition.....with the key element being restraint. ' And restraint is something he takes very seriously indeed."



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Electronic Theses (Ypma, H., London Minimum, 1996, p131)
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Pawson's approach is not limited to smallish urban spaces. Mount Eagle, the home of clients in Ireland idyllically situated overlooking the sea, has benefited equally from his creative imprint. Mount Eagle is a Georgian house of undisputed distinction into which Pawson has introduced his own signature elements. The result is one of pure harmony. The strong simplicity of his work is reinforced by the classical proportions of the Georgian architecture and large open areas defined by subtle, gently contrasting materials. White plaster walls, French limestone floors and Japanese oak staircases conspire to create an elegantly minimal environment.

"the minimalism being practiced in London today has its roots in a 'reductivist tradition'. Mount Eagle brings this tradition full circle; past and present unite in a single statement of reduction and refinement."

(Ypma, H., London Minimum, 1996, p140)

3.2.1.2 Project – John Pawson's house in London's Notting Hill

(a) Introduction

John Pawson's designs explore fundamentals - space, light and materials - and avoid stylistic mannerisms. Pawson's architecture is all about lifting the sense of oppression that comes from 'clutter' by reducing a space and its contents to the barest minimum. He has used his house as an arena, a place to work with new ideas and notions, a place to push the envelope of reduction even further.

"As Cindy Palmano, a noted photographer and enthusiast for Pawson's work, points out: 'Its like asking how you walk in platform shoes – comfort and easiness are not the main concern.....what matters with Pawson's work is the mood his spaces put one in – tranquil, contemplative, elegant.'....."

(Ypma, H., London Minimum, 1996, p131)



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Empty houses, it seems, make most people quite

anxious. They associate physical softness with emotional comfort. Pawson will have none of it. He is convinced that the epitome of modern luxury is space and light – providing a calm that contrasts with the chaos of the city.



Fig: 96 John Pawson, Pawson House, London -Interior view of the House

Source: **London Minimum** (1996)

"What gets people talking about Pawson's work is the lack of stuff. The buildings are stripped of distractions - to fill them with clutter would defeat the object. And Pawson has minimal living down to a fine art. That doesn't mean that he doesn't have any possessions. It's just that he builds storage that is apparently invisible."

(Design innovator: John Pawson- architect, <http://www.observer.co.uk>)

(b) Architectural appreciation

"What John Pawson says on his house design: 'I designed it to let the light in and get the views out and still retain some privacy,' he says. It's not so much empty as calm. The basement kitchen has a wall of glass leading to a mirror image in the back garden. The stairs are tall and narrow, giving an illusion of height, and the shower room has a glass ceiling. 'You can see and hear the weather,' he says.

(Design innovator: John Pawson, architect, <http://www.observer.co.uk>)

Within the original Victorian shell the stacked interior of a standard London house has been transformed by different geometries. On the lower floors, rooms run from front to back and flow into terraces, the linearity of the spaces reinforced by a long stone bench or kitchen counter stretching the length of the house and beyond into the garden courtyard. Walls are painted in white.



Fig: 97 Pawson House, London – Kitchen counter stretching the length of the house
Source: <http://www.eyestorm.com/>

The stair case has been set in a narrow vertical space between two walls; the steps do not touch the walls, creating the impression of a floating staircase.



Fig: 98 Stair case set in a narrow vertical space
- Pawson House, London
Source: **London Minimum (1996)**

Smallest detail is important in simplifying a design as a whole. It is clear when concern detailing in John Pawson's house. Also reduction to essential is not successful, if the design hasn't aesthetic beauty it's own. So enhancing spatial qualities, considerations on; materials, textures, colours, and lighting is essential.

- **Materials**

"Only three materials have been allowed into the John Pawson's house, namely: stone, timber and white – painted plaster".

(Ypma, H., London Minimum, 1996, p138)



Fig: 99 Stool, table, floor in same timber; simply and elegant

Source: **London Minimum** (1996)

For the floor, boards of Douglas fir were laid the entire length of the house in unbroken planks. The stools, bed and the dinning table have been constructed on site from the same timber as the floorboards. The massive planks reinforce the majesty of simplicity.

The kitchen counter top is consisted a single piece of white Carrara marble. Heaviness of material not has been the problem to create simplicity meanwhile catering for essentials. It is clear when concern the materials of floor and kitchen counter top.

Though the space is small, through the minimal approach, it can make feel great to the user. As minimal is not about living in empty, but with essentials which arranged in simply and elegant way of thinking.



Fig: 100 Kitchen is a visual extension of the main space
Source: **London Minimum** (1996)

- **Details**

Using pure geometric forms, in design have enhanced the simplicity. Also the need of simply details in creating minimal architecture is shown.



The beauty of minimal architecture relies on how the designer has catered for essentials meanwhile resulting elegant and tranquil space.

Fig: 101 Kitchen counter top consists of a single piece of marble
Source: London Minimum (1996)

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Fig: 102 Simple designs for furniture.
Source: London Minimum (1996)



Fig: 103 Using pure geometric forms in detailing
Source: London Minimum (1996)

3.3 The Sri Lankan architect’s approaches in Minimalist architecture with special reference to contemporary residential in urban context

3.3.1 Project – Housing block at Kalubowila
Archit. Arosh Gamage

3.3.1.1 Introduction

The building consists of four units of housing and an office at ground floor. This is built in 9 perches plot within a tight urban setting.

Elementary geometry of the house can be recognized clearly in the sense of 3D forms.



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Fig: 104 Exterior view of the house



Fig: 105 Entrance to the building – Following pure geometrical forms

3.3.1.2 Architectural appreciation

(a) Two dimensional form

The use of separating partition was minimized to make individual house block looks bigger and spacious. So that one space flows to the other freely. Within an individual housing unit living, dining and kitchen has been located in one integrated space. One unit consist two bed rooms and one bath room. Further the architecture of this building has concentrated much on lighting, cooling, ventilation etc. Light weight stair case has been placed not to disturb wind direction meanwhile adding simplicity.



Simply design of stair case is enhanced with the colour of wall adding aesthetic.

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Fig: 106 Staircase in simple manner adding aesthetic.

Warm and cool colours have been used, creating aesthetic design regarding the tight urban context.



Fig: 107 Entrance to two housing units

Within a tight urban context, making physical and psychological comfortable place is the designer's target. Also using minimal concept is not totally about catering for function only. Making aesthetic design with essentials is a complex effort. Here from the main entrance to individual unit, designer has make simple and active environment with colour and details.

Vistas and spaciousness make user psychologically comfort within a tight space. From the entrance to individual housing unit visitor is captured by view of window. Also multifunctional space with out partitions adds spaciousness.



Fig: 109 Vistas from the entrance of individual unit



Fig: 108 About to enter the house unit- first view of interior



Fig: 110 View of multifunctional space - living

The wall, rough texture with horizontal line on it direct user towards the simple frame view of the window. White colour of the wall expands the space. Meanwhile Yellow coloured wall has the quality of enhancing the vistas.



Fig: 111 Closer view of multifunctional space - living

No paintings hanging on the wall, Simple lighting decorations. Colour of furniture and cushions well match with the white painted wall. Simply detailing of window, doesn't create disturbance to the exterior view. Balanced composition is an important aspect to achieve minimalist space. The furniture arrangement near window has catered that aspect.

Natural light and ventilation has been taken via windows which are design in simply way that don't include frame or glasses. Within the interior it has both physical and psychological comfort when consider accordance to tight urban context. Though space is limited for individual unit the way colour, natural light and details are used make appropriate for living.



Fig: 112 View of the Pantry



Fig: 113 View of living from the pantry

White colour used throughout the house emphasizes on the fluidity of light and space, while enhancing the purity of form. Use of few numbers of colours is another important concept in achieving minimalism.



Fig: 114 View of the entrance from the living



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(b) Materials

Use of monolithic materials and use of large pieces can be considered as an important concept to achieve sense of wholeness or to experience seamless quality of materials in minimalism. The idea behind that is not to break visual concentration of the perceiver.

The repetition adds simplicity to the design. The horizontal lines of left side wall from the entrance add simplicity meanwhile enhancing wholeness with the aid of texture of floor finish. Also Grey coloured floor finish, instead of using multi colour different shape tiles, which destruct the perceiver's eye, give a simply pleasing look.



Fig: 115 Cement finish adding wholeness

Natural finish of timber has been added to design in pantry cupboards. Same colour grey, is used for side walls of pantry as in floor contains.



Fig: 116 Natural grains to the design in pantry cupboard

(c) Element Details



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Element details are another aspect which enhances the spatial quality of the minimalist space.



Fig: 117 Simple detailing of stair case

Staircase has been designed with timber and steel, limiting to simple details.





Fig: 118 Simple detailing of door with few colours



Fig: 119 Pure geometric forms in detailing



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Fig: 120 Simple detailing of window and racks

Living with essentials is basic concept of minimal architecture. But it is not about empty house. Reduction to basic function is not appropriate for living. More than that whole design has to be simply as well as aesthetic one. So attempt for minimal design is not an easy task. Here architect has succeeded in creating simply and elegant design in tight urban context. Though compared with earlier discussed international projects with this, decorative furniture has been used in appropriate way with out breaking simplicity as a whole. Also using “Minimalism” in an architect’s application is subjective matter as it can be “More” or “less”.

3.3.2 Project – Chandaka Jayasundere House- Colombo.

Archit. Varuna de Silva

3.3.2.1 Introduction

The slim house has been built in the outskirts of Colombo in a tight urban setting, sandwiched between two houses in an extent of nine perch. The urban three – storied dwelling unit has comprehensively designed by the Architect to a lawyer by profession. This house is an introverted, like most urban houses in Colombo due to the small plot sizes and also due to the fact that this site faces a somewhat busy road with residential sprawl. There is a mandatory rear space to be left open to the sky. This space has been utilized to become the garden.

Elementary geometry of the house can be recognized clearly in the sense of 2D and 3D forms.



Fig: 121 Façade to the road



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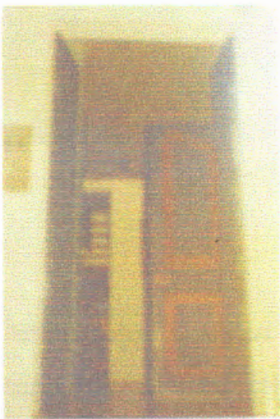


Fig: 122 Simple detailed entrance door

3.3.2.2 Architectural appreciation

(a) Two dimensional form

Two dimensional form is extremely minimal in this design. The use of separating partition walls was minimized to make the house look bigger and spacious. So that one space flows to the other freely. Staircases were also designed as light as possible so that the flowing quality of the spaces is not disturbed. It creates the sense of wholeness by avoiding unusable corridors, odd shape edges and corners.

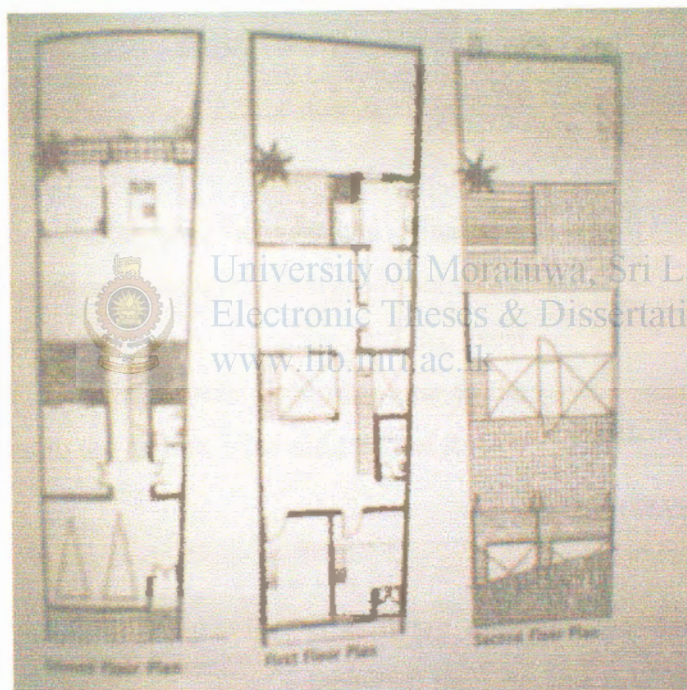


Fig: 123 Plans of the house

As the building is on the edge of a road, the carport is hence accommodated inside the house. The office is close to the carport. Much needed natural light and ventilation, to the house is obtained through the central triple – height void open to the sky space, which are a shallow reflecting pool and a small courtyard.

Huge open free volume creates sense of wholeness which does not break the visual concentration of perceiver. This is an important quality in minimal architecture.

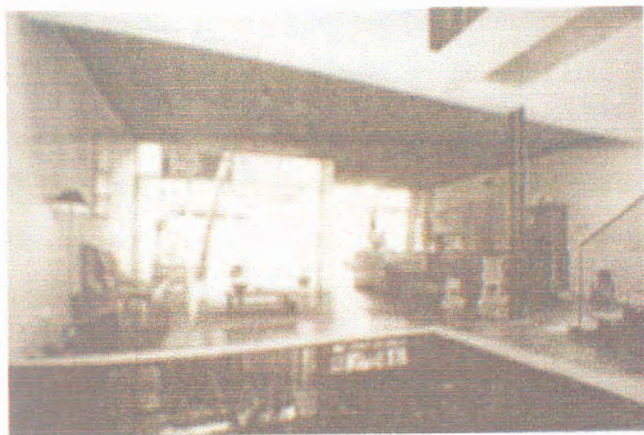


Fig: 124 Huge open free volume creates sense of wholeness

The pool acts as a buffer zone between the office and living areas of the house while maintaining a direct visual link. On the ground floor, only the office and the guest toilet have walls. All other spaces flow from one to the other and open out to the garden, becoming part of it.



Fig: 125 View of the living.



Fig: 126 View of Dining and cooking

The living area has the dining, cooking area facing it, pool on one side and a double height verandah and the garden beyond. The cooking space is also part of this whole open area as the clients love cooking and entertaining close friends often.

The upper floor consists of three bedrooms and two bathrooms. The master bedroom looks down on the garden while the other two bedrooms are in front facing the road. These have small decks from which one could get on to the roof terrace. The family area is in the center, from where one can communicate with the whole house, as this space is adjoining the void in the middle, which is the core of the house.

All these explanations are to emphasize the spatial interpenetration and sense of wholeness which one expects from a minimal house, has achieved by the architect throughout the house.

The client's necessity was to design a comfortable, easily maintainable home with a lot of natural light and ventilation. As the plot was narrow and long, to obtain light and ventilation to the center of the house, part of the center was opened to the sky. This is the method used in traditional Sri Lankan courtyard houses. In addition to natural light and ventilation, this keeps the house cool throughout the day. Also natural lighting has been used to enhance the spatial quality as well as functional purposes. Much needed natural light and ventilation, to the house is obtained through the central triple – height void open to the sky space, which is a shallow reflecting pool and a small courtyard. Comparatively large sparkling pool provides cooling effect while enhancing the spatial quality.



Fig: 127 Living and adjacent rear garden

Also the way colour has been used also enhances the spatial quality. One internal wall is painted orange through all three floors along the length of the house, but rest of the walls is painted with pure white. Grey colour has been used for the floor and soffit. Correcting the error that is often made of identifying minimalism exclusively with the colour of White, combination of orange colour (only in a single wall) with white, have achieved a dynamic composition, that transmit some excitement when viewed in order to avoid monotony or boredom.

(b) Materials

Cut and polished ordinary cement floors, fair faced concrete soffits with shuttering marks exposed enhance the simplicity of monolithic materials. The idea is to enjoy the seamlessness of the material in minimalism. Seamlessness brings a sense of wholeness to the perceiver.

(c) Element Details

Minimal spaces where visual spatial and tactile sensations are central, every small detail has an essential importance. The open rise steel and timber staircases and hand rails have enormous simplicity as elements of the house.

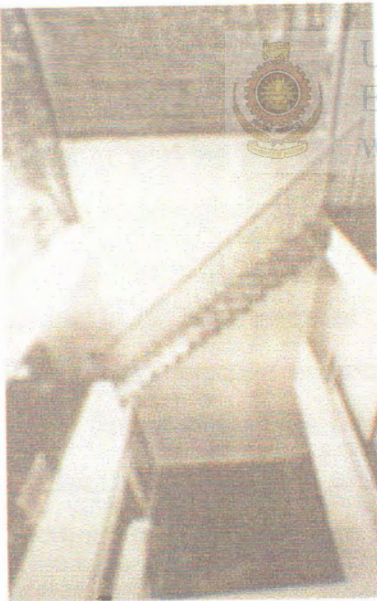


Fig: 128 Open rise steel and timber staircase



Fig: 129 Simple detailing in stair case

CONCLUSION

Minimalism as a concept in general, may vary with each individual's ability to apprehend what minimalism is. Though the term Minimalism was popularized in the 1960's as a design approach, some important concepts of minimalism have existed for a long period prior to that which is in Buddha's time.

Minimalism as a design approach, it caters for essentialities, while providing tranquil, contemplative, soothing and sensual spaces. There is nothing that could be added or removed since every thing fulfills a determined function.

This study reveals the appropriateness of minimalist architecture in contemporary urban residential. As today, contemporary urban environment has become a very congested and a busy in which people work like machines, mentally stressed and physically exhausted. At present, most of people view house as a place to which they retreat, a sanctuary from the stress of working life. The house has been considered the spiritual core of a person thus it should be a place of tranquility.

According to the observation in this study; it reveals that among architects the concept of minimalism is subjective as it can be "less minimalist" or "more minimalist". Also using colour in design varies with the individual architect's aspects and their way of practice. The general idea about use of colour in minimal architecture is, use of pure white or monochromatism. This concept is also influenced by Japanese Zen architecture. But according to the analysis, it appears that it is not essential to be restricted to a single colour. Specially full white interiors could some times oppress the perceiver. With the correct combination of one of two colours with white, achieves a dynamic composition that transmits some excitement when viewed in order to avoid the monotony or boredom caused by a too neutral interior.

Further, simple designs make less impact on nature with compared to complex design. So applying minimalist approach in present urban context is beneficial for both human and his surrounding. But living with essentials, some architects identify as simple design with use of superfluous material and try to depict it as “minimalist”. So that wrong has been corrected with the introducing of term “Eco – minimalism” which sound of environmental sustainable designs via “minimalist approach”. So the term eco-minimalism will make researches awaken to find its’ sense in design both appropriate for human being and natural environment.

Some one may argue this as going backward. But there is limit people can control the nature, more than that nature control human beings.



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